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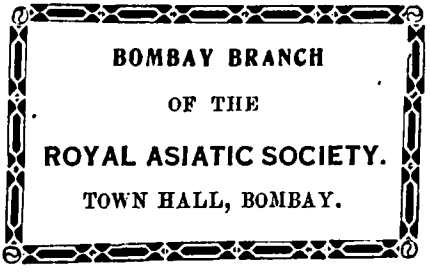

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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH:

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

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BY

JAMES EDWARD SMITH, M.D. F. .S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETIES OF PARIS AND MOSCOW;

PRESIDENT OF THE LINNÆAN SOCIETY.

55372

THE FIGURES BY

JAMES SOWERBY, F.L.S.

——"VIRESQUE ACQUIRIT EUNDO."——*Virg.*

VOL. XXXV.

LONDON:

PRINTED BY R. TAYLOR AND CO., SHOE-LANE, FLEET-STREET;

And sold by the Proprietor, J. SOWERBY, at No. 2, Mead Place, Lambeth; by Messrs. WHITE and Co., Fleet-street; JOHNSON and Co., St. Paul's Churchyard; SHERWOOD, NEELY, and JONES, Pater-noster-row; and by all Booksellers, &c. in Town and Country.

MDCCCXIII.

V.
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55372

Potentilla opaca.

Sep. 1. 1832 Published by Sir J. Smith & Sons London

POTENTILLA opaca.

Saw-leaved Hairy Cinquefoil.

ICOSANDRIA Polygynia.

GEN. CHAR. *Cal.* in 10 segments. *Petals* 5. *Seeds* roundish, naked, generally wrinkled, affixed to a small dry receptacle.

SPEC. CHAR. Radical leaves of seven hairy, linear-wedgeshaped, deeply serrated leaflets; stem-leaves mostly opposite, of three. Stems slender, decumbent.

SYN. Potentilla opaca. *Linn. Sp. Pl.* 713. *Amœn. Acad. v.* 4. 274. *Donn. Cant. ed.* 5. 129.

Quinquefolium quartum, flavo flore, secunda species. *Clus. Hist. v.* 2. 106. *f.* 3.

Pentaphyllum incanum, minus, repens. *Ger. em.* 989.

WHAT Hudson took for the *Potentilla opaca*, appeared from the inquiries of the late Rev. Mr. Wood, about Kippax in Yorkshire, to be only *verna*, and scarcely a variety. Mr. Donn of Cambridge however has received from Scotland the true *opaca*, such as we have also from Switzerland, sent by Mr. Davall. We have cultivated Mr. Donn's plant for several years, and find it invariable, though perhaps our garden specimens may be more luxuriant than those of the mountains. It flowers in June, and is perennial.

Numerous stems spring from the firm woody root, spreading in every direction, decumbent, forming a lax tuft. Each is round, hairy, branched or forked above. Radical leaves on long stalks; stem-leaves nearly sessile, mostly opposite; leaflets three in the latter, seven, rarely five or nine, in the former, all of a narrow wedge-shape, very strongly and distantly serrated or toothed, hairy, not hoary. Flowers handsome, of a rich orange yellow, on long, solitary, axillary or lateral stalks.

2450.
2572

Tremella sarcoides.

Published by J. & C. Rivington, London.

TREMELLA sarcoides.

Fleshy Tremella.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Fructification* scarcely perceptible, in a membranous jelly-like substance.

SPEC. CHAR. Sessile, gelatinous, reddish purple; at first club-shaped; then rounded, lobed, plaited or curled; finally blackish.

SYN. Tremella sarcoides. *With. v.* 4. 78.

T. amethystea. *Bull. Fung. v.* 1. 229. *t.* 499. *f.* 5. *With. v.* 4. 82.

Helvella sarcoides. *Dicks. Crypt. fasc.* 1. 21. *Hull.* 397. *Bolt. Fung. v.* 3. 101. *t.* 101. *f.* 2.

Elvela purpurea. *Schæff. Fung. v.* 4. 114. *t.* 323, 324.

Lichen sarcoides. *Jacq. Misc. v.* 2. 378. *t.* 22.

FOUND on rotten wood, in damp shady places during the autumn. We have gathered it in Tilney gardens, and at Hornsey and Hampstead. Few, even of this tribe, are more variable in form. It is first of a club-like figure, erect, with somewhat of a stalk; but soon dilates into the shape of a top or funnel, composing aggregate or deformed masses, variously rounded or lobed. Its substance is semipellucid, gelatinous, with a toughish elastic skin; the colour a vinous or flesh-like purple, turning dull, and at last black, in decay.

Persoon's *Peziza sarcoides*, (*P. tremelloidea* of Bulliard, t. 410. f. 1), which he has confounded with the above, seems to be a real *Peziza*. We have met with it several times. Its shape is far less variable; the upper surface deep purple; the outside pale, with branching elevated veins or plaits.

Pl. 24 1812 published by Jas. Sowerby London

TREMELLA vesicaria.

Bladder Tremella.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Fructification* scarcely perceptible, in a membranous jelly-like substance.

SPEC. CHAR. Membranous, somewhat rigid, brownish white, pouch-like, filled with viscid evanescent jelly.

SYN. Tremella vesicaria. *Bull. Fung.* 224. *t.* 427. *f.* 3.

BULLIARD mentions this as a very rare species. Our specimen was found many years since, by the late Mr. Jacob Rayer, near Maidstone, Kent, and communicated to Mr. Sowerby by T. F. Forster, Esq.

This *Tremella* always grows on the ground, either solitary or in tufts, fixed by fibrous radicles. When young it consists of a turgid bag, whose coat is about half a line in thickness, pliable, with a considerable degree of firmness and elasticity, enclosing a mass of viscid jelly. The jelly is in time discharged by a rupture of the bag, which collapses, and looks like the fresh bladder of an animal just emptied of its contents. The whole assumes a reddish brown hue as it verges towards decay. Bulliard speaks of a green variety, unknown to us.

Exidia flaccida

Engraved & published by J. Sowerby & Son

TREMELLA flaccida.

Pendulous Black Tremella.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Fructification* scarcely perceptible, in a membranous jelly-like substance.

SPEC. CHAR. Membranous, thin, flaccid and pendulous, very black; externally opaque and roughish; internally corrugated.

WE conceive this to be a nondescript species of *Tremella*, very distinct and curious in its nature, though most akin to Bulliard's supposed variety of his *Peziza nigra*, *t.* 116. Ours was found on the perpendicular trunk of a living Oak in Petersham park, growing several specimens one above another, drooping downward in a bell-shaped manner, so that the external surface of the plant, which should naturally be inferior, became uppermost. This surface, when fresh, resembled black crape in colour and roughness. The inner or concave side, which should have been uppermost, is smooth and more shining, furnished with several vein-like wrinkles.

1661

Tortula brevifolia

Sep. 10 1832 published by Jas. Sowerby London

TORTULA brevifolia.

Short-leaved Screw-moss.

CRYPTOGAMIA, Musci.

GEN. CHAR. *Fringe* simple, of numerous capillary teeth, spirally and repeatedly twisted together.

SPEC. CHAR. Stem simple or branched. Leaves ovato-lanceolate, keeled, revolute. Fruitstalks lateral. Capsule cylindrical.

SYN. Tortula brevifolia. *Sm. Fl. Brit.* 1259. *Winch v.* 2. 22.

Bryum brevifolium. *Dicks. Crypt. fasc.* 2. 4. *H. Sicc. fasc.* 11. 19. *With.* 831. *Hull.* 262.

B. palustre brevifolium, capsulis nigricantibus. *Dill. Musc.* 377. *t.* 47. *f.* 39.

B. trichoides, erectis capitulis fusco-nigris. *Dill. in Raii Syn.* 96.

THIS moss, which few botanists have observed, was originally found in Yorkshire by Dr. Richardson, and subsequently in Scotland by Mr. Dickson. It is a native of mountain bogs. Our present specimen we owe to the favour of Mr. Winch, who found the plant in bogs on the moors near Blanchland, in Northumberland and Durham.

Its general hue is dark, like most water mosses. The stems are about an inch high, simple or branched, growing in uneven tufts. Leaves when young pale green, but soon turning brownish. Their shape is lanceolate with an ovate broad base; rather acute, but not awned, at the point; the edges entire, strongly revolute; and there is a strong, prominent, reddish central rib, besides two small lateral ones. When dry the leaves become close-pressed, or slightly incurved. The fruitstalks are lateral, solitary on each stem or branch, an inch high, red brown, blackish when old. Capsule erect, cylindrical, smooth and even, dark brown, in some measure ovate at the base. Fringe slender, of a rather light, reddish brown not crimson.

2454.
1930

Opegrapha venosa

Sowerby del. et fec.

OPEGRAPHA venosa.

Veiny Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

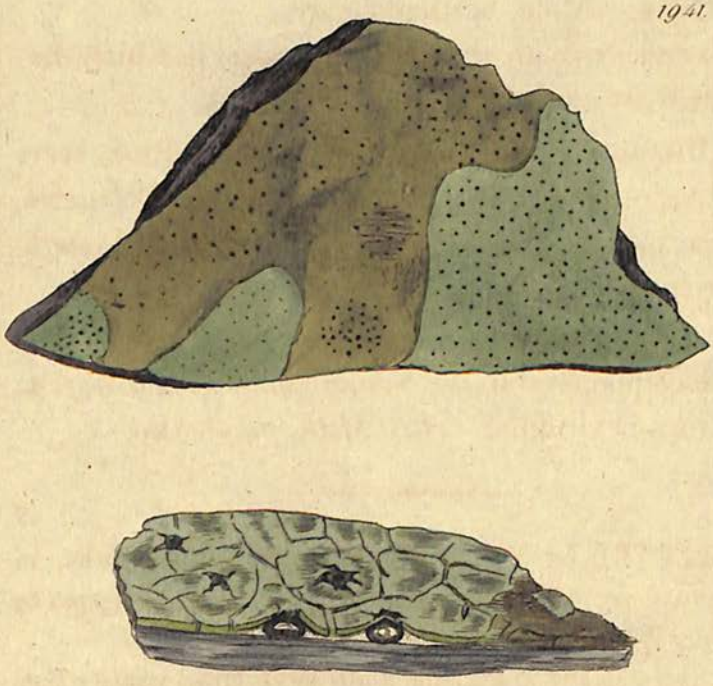
SPEC. CHAR. Crust tartareous, determined, reddish white. Clefts immersed, convex, without any elevated border, repeatedly branched, curved, parallel and equidistant, obtuse at the ends.

DISCOVERED by Charles Lyell, Esq. growing upon the trunks of Beeches in Hampshire, but rarely. It is remarkable for being always surrounded by *Lichen obscurus*, *t.* 1752, now reckoned an *Arthonia*; see *v.* 29. 2079.

Nothing can be more curious or distinct than the present species, when duly examined. The crust is limited, and perhaps black-edged; but this it is hard to determine, on account of the surrounding plant, which has certainly a black border. Its substance is tartareous, rugged and uneven, white with a dirty reddish tint, scarcely powdery. The clefts are curiously and regularly dispersed, much branched and twisted, but their ramifications, however complex and varied, keep generally at equal distances from each other, like the walks of an artificial maze. They are deeply sunk in the crust, but convex above, intensely black, with obtuse terminations; not tapering to a point, as in *O. dendritica*, *t.* 1756, nor do they, as in that, spread radiating from a centre.

Mr. Lyell at first sent this *Opegrapha* under the apt name of *elaborata*; but appears to have since determined it to be the *venosa* of Persoon, of which however we find no mention in any book that has yet come to our hands. Perhaps it may be included in the *Lichenographia Universalis* of Acharius.

2455.
1941.



Verrucaria clavina

LICHEN viridulus.

Greenish Dot Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust imperfectly circumscribed, very thin, cracked, pale greenish olive. Tubercles black, hemispherical, pointed, prominent through irregular openings.

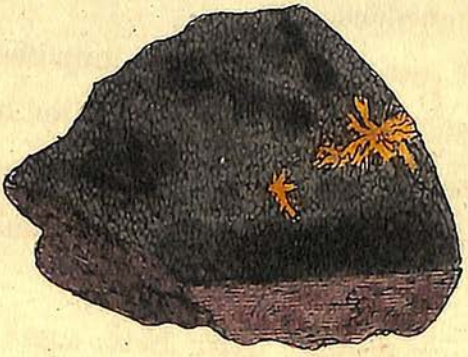
SYN. Lichen placothallus. *Ach. Prod.* 18.
Endocarpon viridulum. *Schrad. Spicil.* 192. *t.* 2. *f.* 4.
Verrucaria viridula. *Ach. Meth. suppl.* 16.

COLLECTED by Miss Hutchins, on fissile slate rocks, in shady situations, in the west of Ireland, and communicated to us by Mr. W. Borrer.

The very thin and inseparable crust forms broad washy stains, very loosely circumscribed, of a greenish olive when wet; more grey and shining when dry. Plentiful tubercles are scattered throughout the crust, each bursting at first through an irregular star-like crack; but they soon rise above the surface, appearing partly denudated, and on dissection are found to be black, hemispherical, with a central papillary elevation. At length a small circular depression is perceptible in the summit of this protuberance.

L. viridulus, Ach. Prod. 29, is a *Variolaria*, which genus we have already adopted; see *v.* 34. 2400.

2456.
1946.



Verrucaria maura?

Engraved, Printed & Published by J.C. Sowerby, London.

LICHEN maurus.

Blackmoor Dot Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

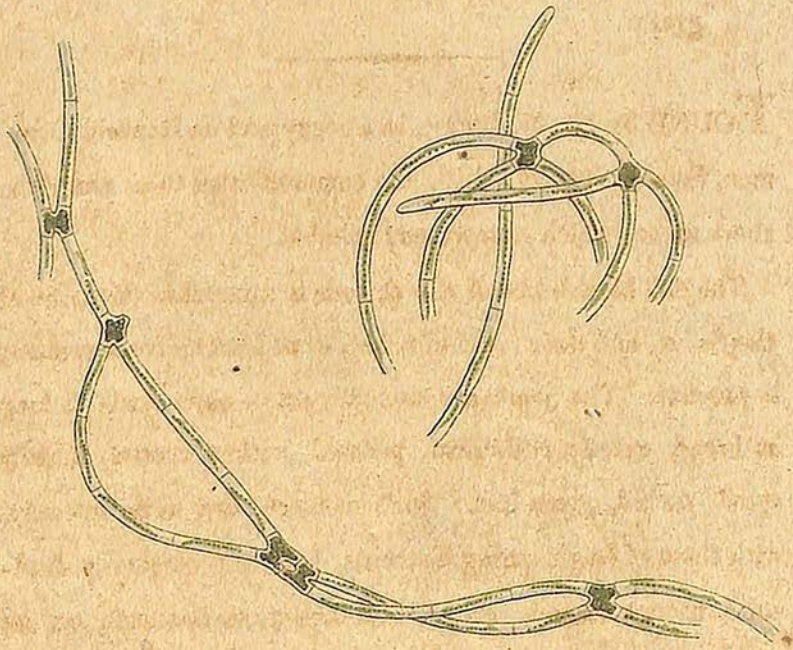
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust thin, continued, imperfectly circumscribed, coal-black, smooth, with innumerable minute cracks. Tubercles black, immersed, swelling under the crust, and marked by an umbilicated dot.

SYN. Verrucaria maura. *Ach. Meth. suppl.* 19.

FOUND frequently on the Scottish coast, by Mr. W. Borrer. Our specimen, taken by that gentleman from rocks near the sea-side at Dunbar, is on a reddish porphyritical stone or indurated clay.

The crust is widely extended in continued very black patches, without any marked or regular border; its substance thin, hard, inseparable from the stone; the surface smooth, somewhat polished, full of minute angular cracks. In the interstices of these cracks are found numerous slight elevations of the crust, each at length marked with a minute umbilicated depression. The tubercle underneath never prôtrudes, but on dissection is found imbedded in the crust, and of an intense black colour.



Sept. 1. 1812 published by J. & J. Sowerby London

CONFERVA cærulescens.

Sky-blue Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

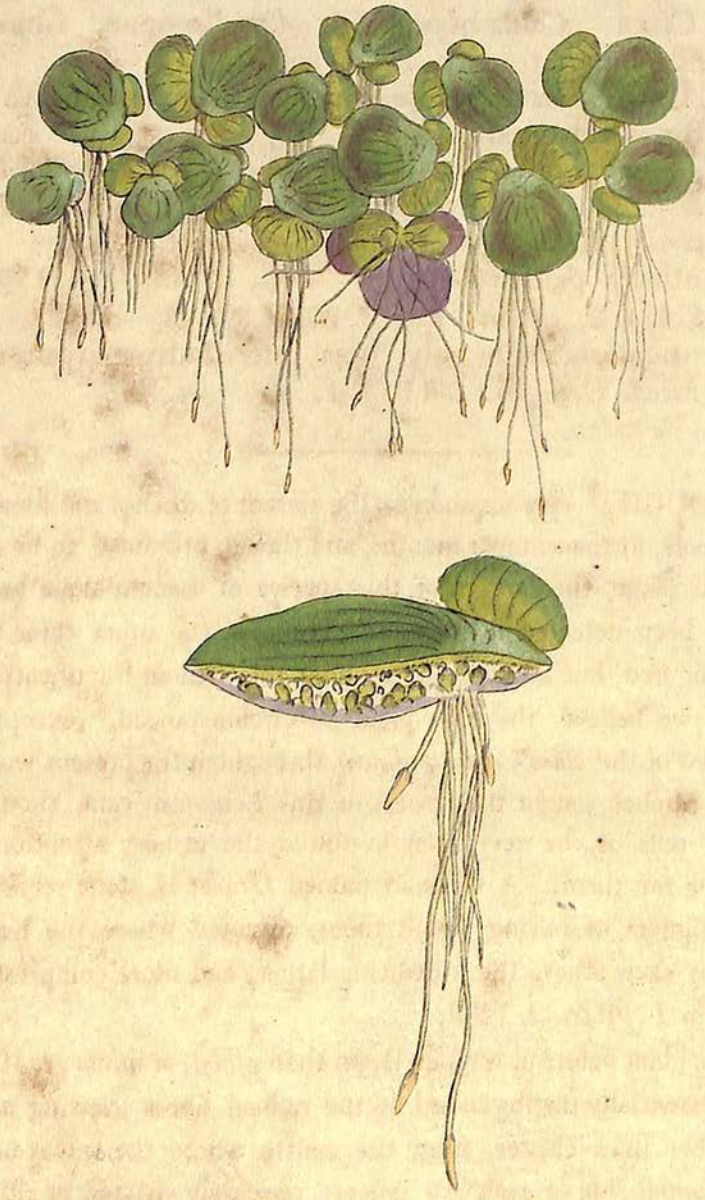
SPEC. CHAR. Light purplish blue. Filaments unbranched, slender, curved, approximating and uniting here and there. Joints six times as long as broad, the combined ones greatly shortened. Seeds green.

FOUND by Mr. W. Borrer, in a boggy pool on Henfield Common, Sussex, July 3d, 1812, and communicated to us under the above name, which appears very suitable.

The dull blueish hue of the threads is unusual in this tribe of *Confervæ*, and their mode of union, or at least its consequences, is peculiar. The joints are originally six or eight times as long as broad, exactly cylindrical, pellucid, with a central, slightly spiral, dotted, green line. Such as meet, and unite laterally, with those of neighbouring filaments, become prodigiously shortened, though scarcely dilated, and their green contents, on coalescing, grow more enlarged and conspicuous.

This species belongs to the family of *conjugatæ*, like *C. nitida*, *t.* 2337; *spiralis*, *t.* 1656; *geniculata*, *t.* 1914, &c.

2408
36



Lemna polyrrhiza

LEMNA polyrrhiza.

Greater Duck-weed.

DIANDRIA Monogynia.

GEN. CHAR. *Calyx* of one leaf. *Corolla* none. *Capsule* superior, with several seeds.

SPEC. CHAR. Leaves sessile, somewhat convex beneath. Roots clustered.

SYN. Lemna polyrrhiza. *Linn. Sp. Pl.* 1377. *Sm. Fl. Brit.* 958. *Huds.* 399. *With.* 44. *Hull. ed.* 2. 266. *Relh.* 359. *Sibth.* 15. *Abbot.* 199.

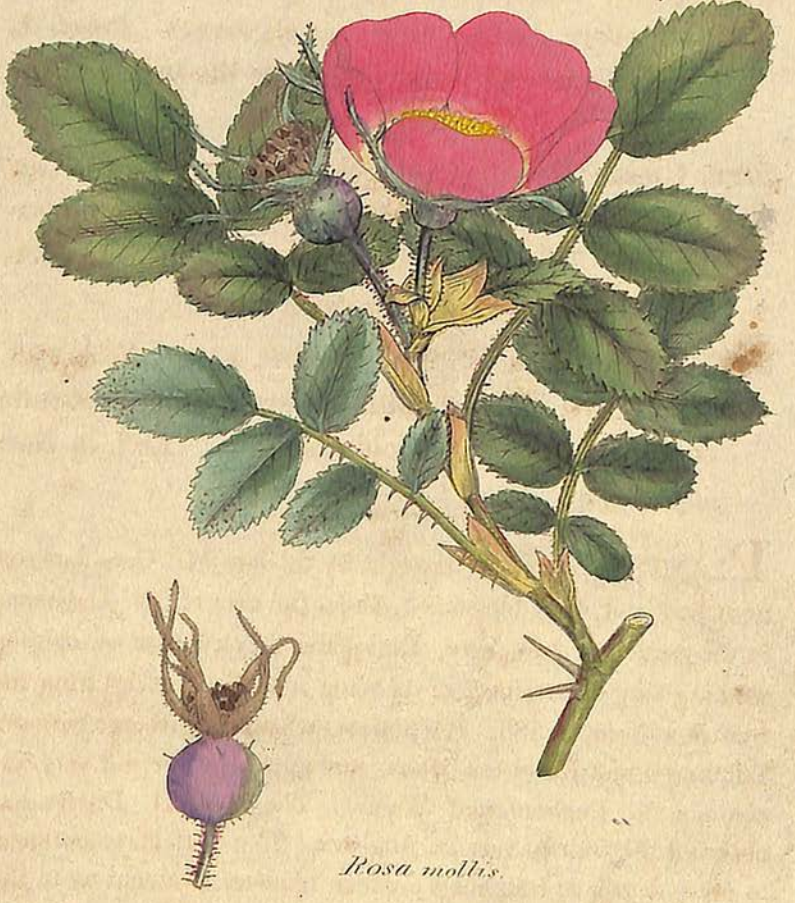
Lenticula palustris major. *Dill. in Raii Syn.* 129. *t.* 4. *f.* 2. *Vaill. Par. t.* 20. *f.* 2.

Lenticularia major polyrrhiza, infernè atro-purpurea. *Mich. Gen.* 16. *t.* 11. *f.* 1.

THOUGH so very common on the surface of ditches and standing pools, in the summer months, and though presumed to be an annual plant, the flowers of this species of *Lemna* alone have never been detected in Britain. Those of the other three we have figured, but are obliged to exhibit this without fructification. It is, we believe, the only plant so circumstanced, (except a very few of the class *Cryptogamia*,) throughout the present work. Even Micheli sought the flowers of this *Lemna* in vain, though, as he tells us, he very often bestowed the utmost attention in looking for them. A German named Graver is alone recorded by Wiggers as having found them, situated where the leaves overlay each other, the fruit being larger, and more compressed, than in *L. gibba, t.* 1233.

The plant before us is much larger than *gibba*, or *minor, t.* 1095, and essentially distinguished by the radical fibres growing many together in a cluster, from the centre where the leaves unite. The upper side of each leaf is level, obscurely striated or ribbed, dark-green; the under purple, and rather convex.

We would, by all means, remove this genus from *Monœcia*.



Rosa mollis.

Sowerby published by Jas Sowerby London.

ROSA mollis.

Soft-leaved Round-fruited Rose.

ICOSANDRIA Polygynia.

GEN. CHAR. *Cal.* urn-shaped, fleshy, contracted at the orifice, terminating in 5 segments. *Petals* 5. *Seeds* numerous, bristly, fixed to the inside of the calyx.

SPEC. CHAR. Fruit globose, half as long as the segments of the calyx, bristly as well as the flower-stalks. Prickles of the stem straight. Leaflets elliptic-ovate, downy on both sides.

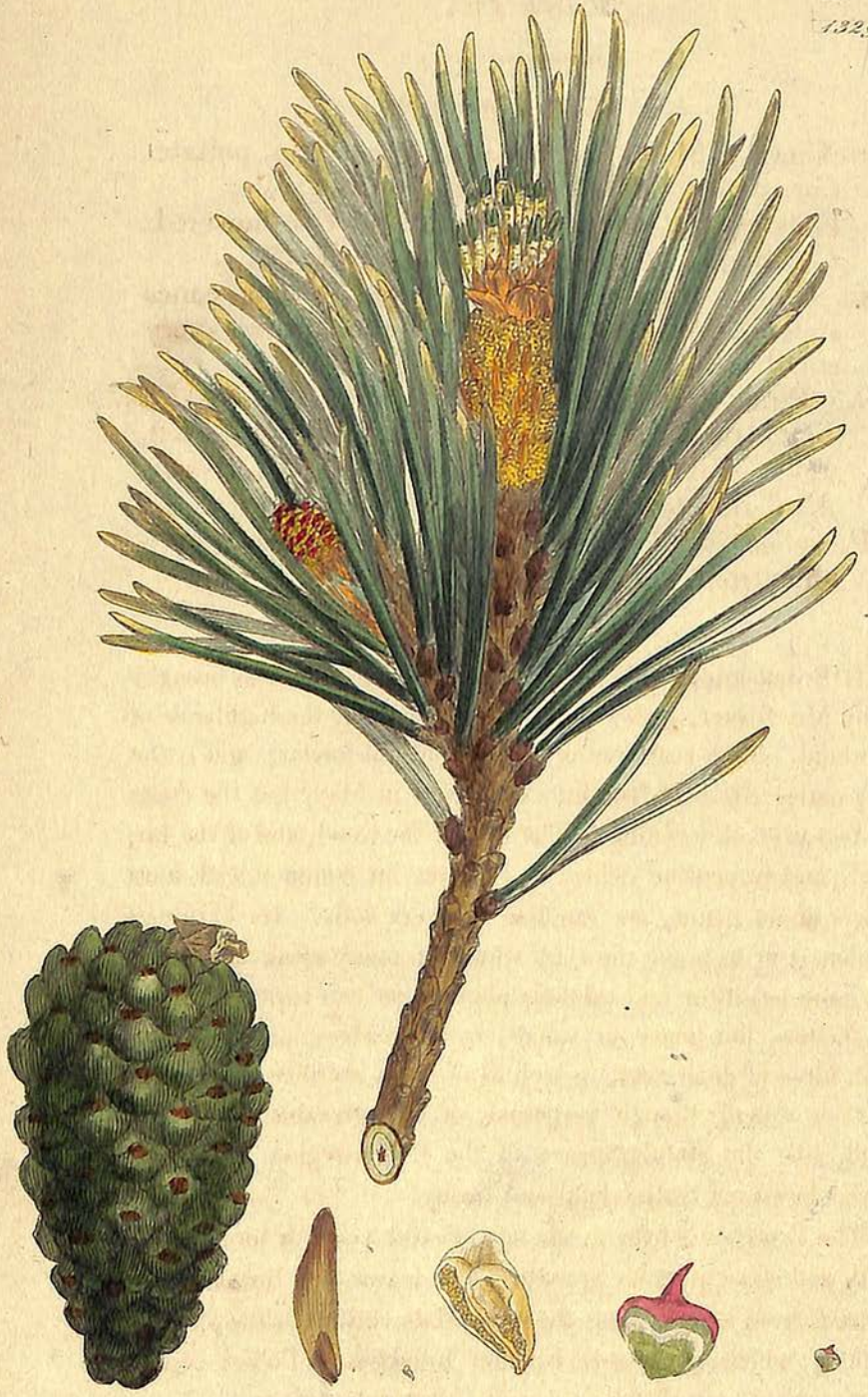
SYN. Rosa villosa *β. Sm. Fl. Brit.* 538. *Relh.* 193. R. sylvestris, folio mollitèr hirsuto, fructu rotundo glabro, calyce et pediculo hispidis. *Dill. in Raii Syn.* 478.

PLANTS of this Rose, brought by the late Mr. Geo. Jackson from Scotland, have blossomed, under the care of Mr. Anderson, in the garden of Jas. Vere, Esq.; and they confirm an opinion we have long entertained, of its being a distinct species from the true *R. villosa, t.* 583. It is however what was gathered between Edinburgh and Ravelston wood, and appears to be not very uncommon in England and Wales. The Rev. H. Davies has observed the fruit to vary in Anglesea, from perfect smoothness to every degree of roughness; which removes all doubt as to the synonym of Dillenius.

The stem is of much humbler growth than that of the *villosa*; the leaflets less elongated, and more inclining to ovate; the petals of a deeper red; the ripe fruit much smaller. One segment of the calyx, and no more, is often very distinctly pinnated.

The leaflets in our *t.* 583 are not sufficiently elongated, nor so correctly elliptical as they ought to be.

2460.
1329.



Pinus sylvestris.

Sprunt published by Jas. Lumley London

PINUS sylvestris.

Scotch Fir.

MONOECIA Monadelphia.

GEN. CHAR. Male, *Cal.* the scale of a catkin, peltate. *Cor.* none. *Anthers* sessile upon the scale. Female, *Cal.* the scale of a catkin, two-flowered. *Cor.* none. *Nut* winged, of one cell.

SPEC. CHAR. Leaves rigid, in pairs. Young cones stalked, recurved. Crest of the anthers very small.

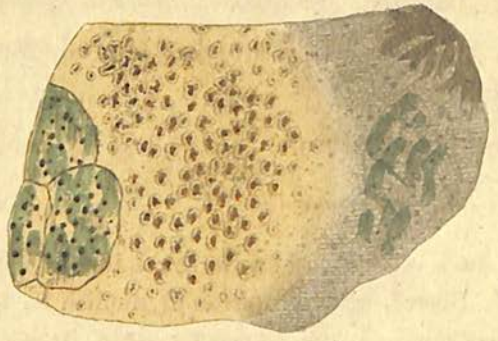
SYN. Pinus sylvestris. *Linn. Sp. Pl.* 1418. *Sm. Fl. Brit.* 1031. *Huds.* 423. *With.* 615. *Hull. ed.* 2. 282. *Lightf.* 587. *Ger. em.* 1356. *Woodv. Med. Bot. t.* 207. *Lamb. Pin.* 1. *t.* 1.

P. sylvestris, foliis brevibus glaucis, conis parvis albentibus. *Raii Syn.* 442.

THIS well-known tree, of which a wild specimen was brought us by Mr. Borrer, grows plentifully throughout the highlands of Scotland, either scattered or in vast natural forests, and is the only native *Pinus* of Britain. It flowers in May, but the cones are two years in ripening. The uses of the wood, and of the tar, pitch, and turpentine yielded by this tree, in common with most others of its genus, are familiar to every body. Its hardiness renders it fit to brave the cold winds of many bleak situations, till more beautiful and valuable plantations can spring up under its shelter; but hence fir woods, in themselves, are associated with ideas of dreariness, as well as of sandy sterility of soil; nor is their green, though perpetual, of an agreeable or cheerful kind, like the stately Spruce of the "Norwegian hills," and alpine forests of Switzerland and Savoy.

The Scotch Fir lives to the age of 400 years or more, and is lofty and straight in its growth. The leaves are linear, acute, in pairs from membranous sheaths. Male catkins yellow, in dense spikes, which afterwards become branches. Pollen copious. Cones ovate, tessellated, tubercled, but not spinous.

2401
1970



Thelotrema melaleucum

Lepra pubblicata da J. & L. Lambert & Co.

LICHEN melaleucus.

Brownish Covered Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

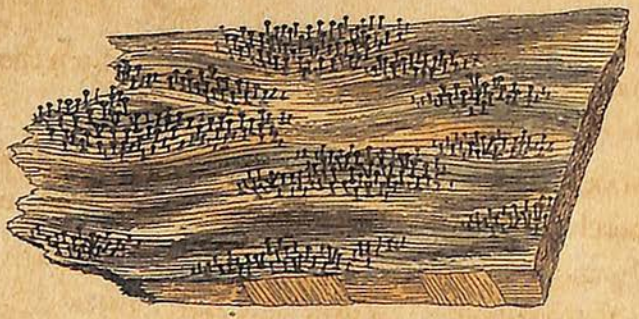
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crustaceous, cream-coloured, with scattered, rather convex, warts, opening by an irregular inflexed orifice. Shields immersed, depressed, brown, with a thin, obsolete, jagged border, of their own substance.

SYN. Thelotrema melaleucum. *Turn. and Borr. Mss.*

FOUND on the bark of young oaks, in St. Leonard's forest, Sussex, by Mr. W. Borrer, who proposes to publish it, under the synonym we have cited, in the *Lichenographia Britannica*. We retain the specific name, in reducing the plant to *Lichen*; because the former *L. melaleucus, Ach. Prod.* 15, is a nonentity, or rather not distinct from *gemmatus, ibid.* 17, as Dr. Acharius has been so good as to inform us by letter.

The present is most akin to our *inclusus*, *t.* 678, but sufficiently different. Its crust makes irregularly elliptical, cream-coloured, thin patches on the smooth bark, an inch or two over, of a filmy, scarcely tartareous, substance, smooth and rather polished, not bordered, but gradually thinner and fainter at the edge. Numerous, rather tumid, warts are scattered over the surface, in each of which is deeply lodged a brown depressed shield, or disk, with a thin, irregular, inflexed, often obsolete, border, of its own hue and substance, encompassed with the irregular orifice of the wart, though not always united therewith.



Sowerby publish'd by Jas Sowerby London.

LICHEN debilis.

Weak Pin-headed Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

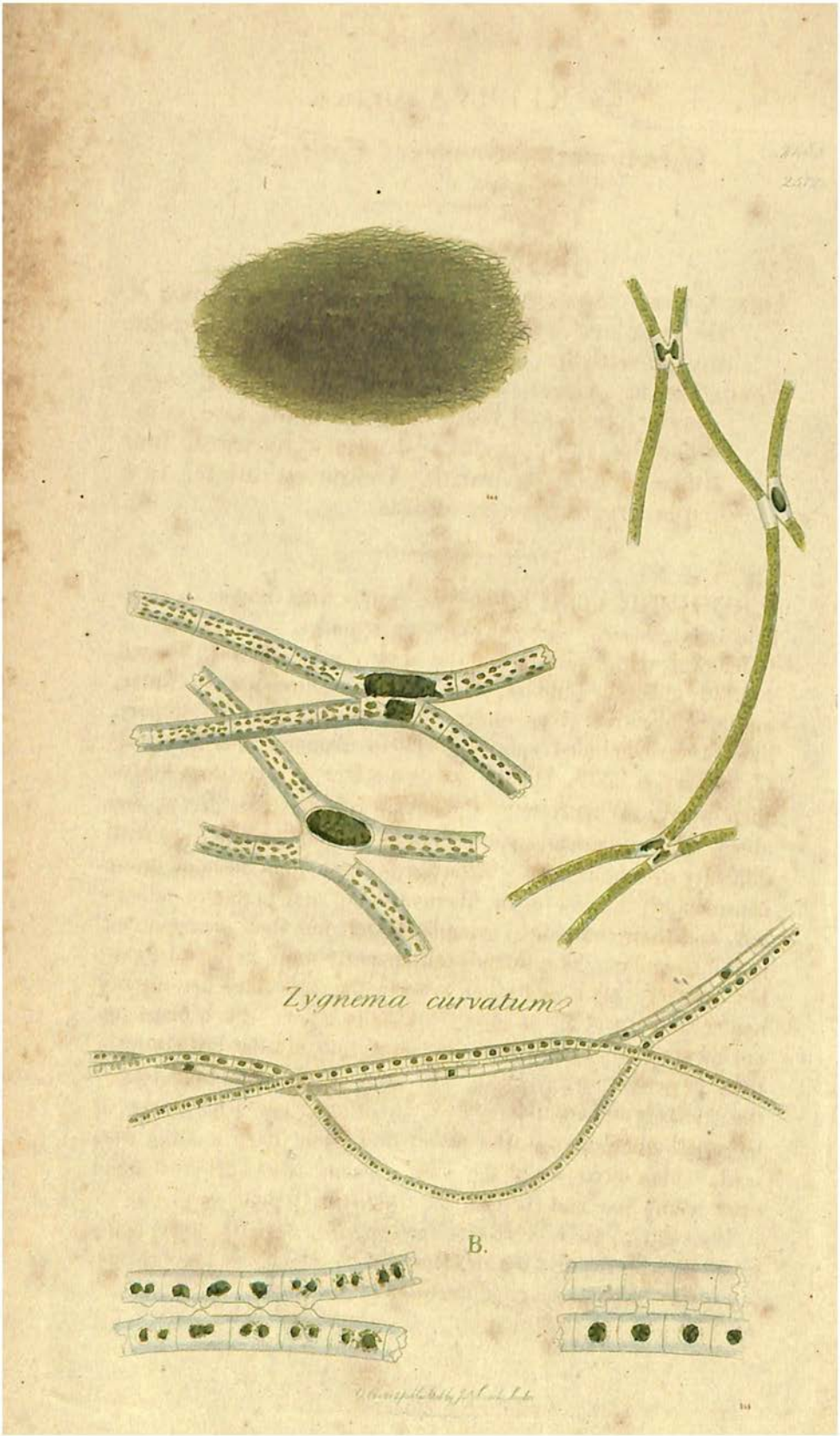
SPEC. CHAR. Crust membranous, very thin, white. Tubercles black, convex with a recurved margin, on long, slender, wavy, black stalks.

SYN. Calicium debile. *Turn. and Borr. Mss.*
Coralloides fungiforme arboreum nigrum, vix crustosum. *Dill. Musc.* 78. *t.* 14. *f.* 3 A?

OBSERVED by Mr. W. Borrer on old timber, frequently under the eaves of thatched buildings, where its thin white filmy crust often spreads very widely. The fructification is copious, consisting of very black, opaque, more or less convex tubercles, whose margin is reflexed, and which are each supported by a black, slender, wavy stalk, occasionally forked or divided, sometimes polished, sometimes not.

Mr. Borrer indicates the above synonym of Dillenius; but the magnified part of the figure seems different, as well as the portion marked B.

We are well aware that the genus *Calicium* must finally be adopted, and we merely for the present refer its species, as heretofore, to *Lichen*.


Zygnema curvatum?
B.

CONFERVA stictica.

Many-dotted Combined Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

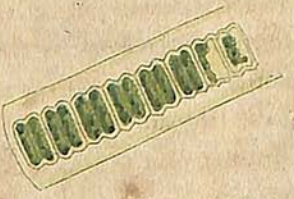
SPEC. CHAR. Green. Filaments unbranched, very slender, here and there slightly bent, and combined by their angles. Joints cylindrical, four times as long as broad. Colouring matter in a triple irregular series of dots.

COMMUNICATED by Mr. W. Borrer from ditches in Henfield Level, Sussex, with the following remarks.

It forms large masses on the water, much like *C. fracta*, *t.* 2338, full of air-bubbles, being pale and yellowish above water, and of a blackish green under. The threads are not slippery, like other combined species. Their diameter nearly equals *C. nitida*, *t.* 2337, but the joints are four or five times longer than broad. When young, the colour is a dull pale green, and about three imperfectly spiral lines of shining granules are with difficulty distinguishable. Afterwards these lines become more conspicuous, the rest of the filament being now perfectly colourless, and their component granules larger, but their arrangement is still irregular. The threads subsequently unite here and there, not by every joint, and their connecting processes are usually nearer to one end of the joint than to the other. Such filaments are divaricated at the points of connection, rather less abruptly than in *geniculata*, *t.* 1914. In some of the combined joints, the contents appear unchanged; in others they form a mass of larger granules than in the lines; and some have a large oval seed, which often swells the joint. Some traces of unchanged lines occur, now and then, in the fructifying joints.

We subjoin, at B, a bit of *C. bipunctata*, *t.* 1610, in its combined state, sent also by Mr. Borrer; by which, as he observes, it appears to be *Conjugata cruciata* of Vaucher.

246
2479



Conferva dissiliens

CONFERVA dissiliens.

Brittle-jointed Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Simple, slender, straight, bright green, brittle. Joints twice as broad as long, white-edged, distinct and separable, with a double mass of internal granules.

SYN. Conferva dissiliens. *Dillw. Syn.* 51. *Conf. t.* 63.

MR. BORRER finds the present species "in pools, on Henfield Common, and near Twineham, Sussex, always floating loose, in masses, mixed more or less with other *Confervæ*; never affixed to reeds, &c., as Mr. Dillwyn describes it."

This closely resembles our *C. bicolor*, *t.* 2288, under a moderate magnifier, even in being sometimes partially colourless; but differs altogether from it in structure, being one of those observed by Dr. Roth to have really separate joints, whose partitions are formed from the membrane which composes the tube itself; whilst in *bicolor*, and a few other unbranched species, as well as many of the branched ones, the thread or filament is a continued tube, containing a series of distinct vesicles. These last, of course, are not brittle at the joints.

In *C. dissiliens* the joints are either very short and broad, and finally confluent in pairs; or rather, as Mr. Borrer seems to think, the mass of green granulations contained in each joint separates, as in *C. bipartita*, *t.* 2302. The greatest diameter of its filament is one 700dth part of an inch. The joints being so distinctly defined, the colouring matter can never be rounded off in any of them, from the emptiness of its neighbour, as in *bicolor*. For these remarks we are indebted to Mr. Borrer.

2465.

2463.

Callithamnion purpurascens.

Published by J. Sowerby, London.

CONFERVA purpurascens.

Purple Veiny Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Purplish red, repeatedly branched, very slender and tufted. Joints slightly tumid, thrice as long as broad, with pellucid partitions: those of the main stems compound. Capsules lateral, obovate, sessile.

SYN. Conferva purpurascens. *Huds.* 600. *With. v.* 4. 138. *Hull.* 333. *Turn. Tr. of L. Soc. v.* 7. 108.

C. marina nodosa, coralloidis montani instar ramosa. *Dill. Musc.* 36. *t.* 7. *f.* 41.

GATHERED on the beach at Brighthelmstone, in July last, by Mr. W. Borrer, who thinks it may be *C. purpurascens* of Hudson, a species hitherto involved in some doubt, and thought by Mr. Dillwyn the same as our *rosea*, *t.* 966. We should be much inclined to adopt the opinion of this able writer, were his own *rosea* (*Conf. t.* 17.) free from uncertainty. See his *Synopsis*, 79. We can scarcely doubt that the above synonyms are right. The only question is, whether these two species be distinct. Mr. Borrer observes that "the stem and principal branches of the present are (veined, or) composed of several contorted tubes, each of which is jointed individually, the general dissepiments in those parts being very obscure." In other respects, except a rather more tufted habit, and a greenish or brownish hue, it agrees with *C. rosea*.

Mr. Borrer's observations, having been made upon fresh specimens, claim the greatest confidence, or we should suspect the veins, or seeming tubes, might be caused by drying, as we find some appearance of them in our dried specimens of *rosea*; at least in what we have so named. The two plants have probably been hitherto confounded. We submit the whole matter to future decision.

2466

RIVULARIA verticillata.

Whorled Pink Rivularia.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* gelatinous, firm, destitute of an external cuticle. *Fructification* among jointed filaments, lodged in the substance of the frond.

SPEC. CHAR. Cylindrical, much branched, very gelatinous, pale pink; branches alternate; the ultimate ones very numerous, of equal thickness. Internal filaments whorled, repeatedly forked. Fruit obovate, lateral.

SYN. Ulva verticillata. *With. v.* 4. 127. *Hull.* 313.

FOUND last July, on the beach at Brighthelmstone, by Mr. W. Borrer. Miss Hutchins sent a drawing of a plant of the same species to Mr. Turner, from Ireland, observing that it was "the most gelatinous plant she had ever seen." From this drawing we have copied the highly magnified fructification.

The colour when fresh is a pale pink, which becomes somewhat darker by being kept out of the water. Several very compound stems arise from one root. The branches are all alternate; the smaller ones pretty exactly cylindrical and obtuse, formed of innumerable close whorls, of repeatedly branched, taper-pointed, jointed, pink filaments, set upon a jointed, still paler, stem, the whole enveloped in mucilage, which renders it very slippery. The capsules or seeds are obovate, red, standing solitary and laterally near the extremities of these fine filaments. We see no reason to doubt this being the *Ulva verticillata* of Withering, for which several botanists have taken it.—Mr. Borrer observes that, when floating, it considerably resembles *Fucus Wigghii*, *t.* 1165, which is a *Rivularia*; and Mr. J. D. Sowerby noticed the ultimate branches, in that situation, to be all recurved.

2467.
2*

Pubd by J. & Lowry London

SALICORNIA fruticosa.

Shrubby Jointed Glasswort.

MONANDRIA Monogynia.

GEN. CHAR. *Calyx* swelling, undivided. *Petals* none. *Stamens* 1 or 2. *Seed* 1, enclosed in the calyx.

SPEC. CHAR. Stem woody, ascending. Joints and interstices cylindrical. Spikes nearly sessile, cylindrical, obtuse.

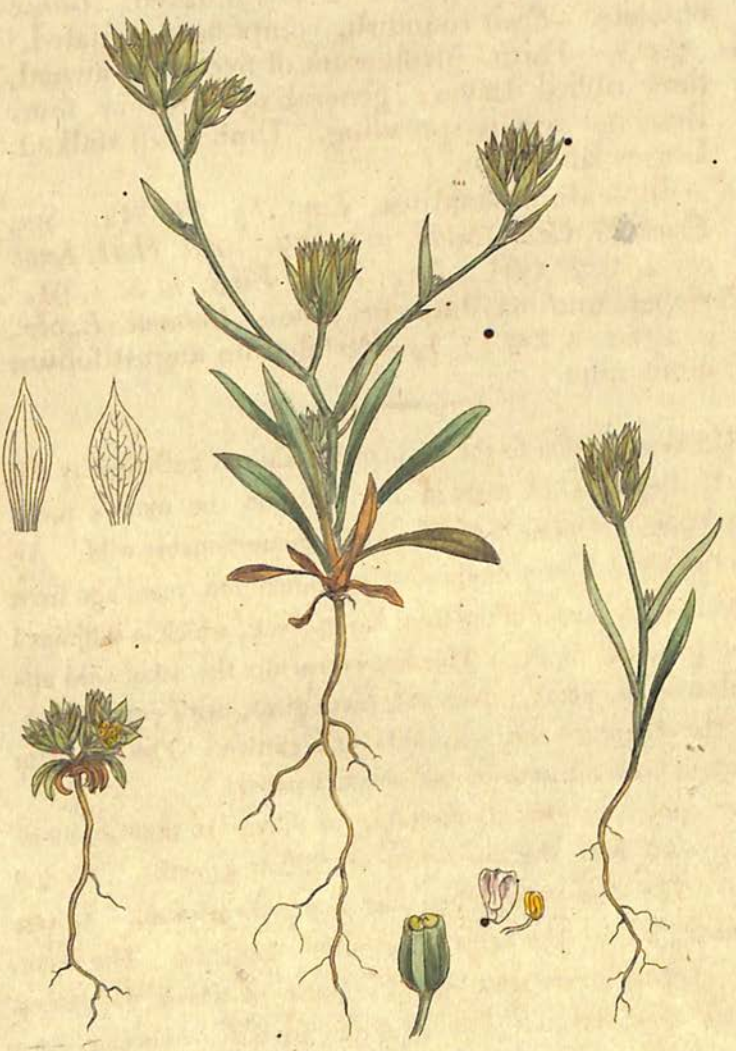
SYN. Salicornia fruticosa. *Linn. Sp. Pl.* 5. *Sm. Fl. Brit.* 3. *With.* 3. *Hull. ed.* 2. 2.

S. europæa γ. *Huds.* 1.

Kali geniculatum perenne fruticosius procumbens. *Raii Syn.* 136.

Kali. *Camer. Epit.* 246.

THIS plant has found a place in the *Fl. Brit.* on the authority of the original specimens which Ray and Dillenius had before them, as well as of others found by Mr. Yalden near Weymouth; all which have been compared with the Linnæan one, taken to them on purpose. Several of our most intelligent friends having sought for the plant in vain at Weymouth, we are reduced to the necessity of delineating one of Mr. Yalden's specimens, now in Her Majesty's possession; permission having been graciously given to Mr. Sowerby for that purpose. It will serve to show what all the above synonyms intend, if not to establish this *Salicornia* as a certain species. We should have no doubts, were it still to be found on any part of our coasts. The cylindrical slender interstices of the joints, the small short dense spikes, and the shrubby much-branched stem, all indicate a specific distinction. But it is not impossible that these characters may all take place in our *S. radicans*, *t.* 1691, whenever a few successive mild winters may allow it to acquire a more permanent and woody stem than usual. Still however we find the style only simply divided, at least in the Linnæan herbarium. The other specimens have not been examined in that respect.



Bupleurum odontites.

Published by Jas. Sowerby London

BUPLEURUM odontites.

Narrow-leaved Hare's-ear.

PENTANDRIA Digynia.

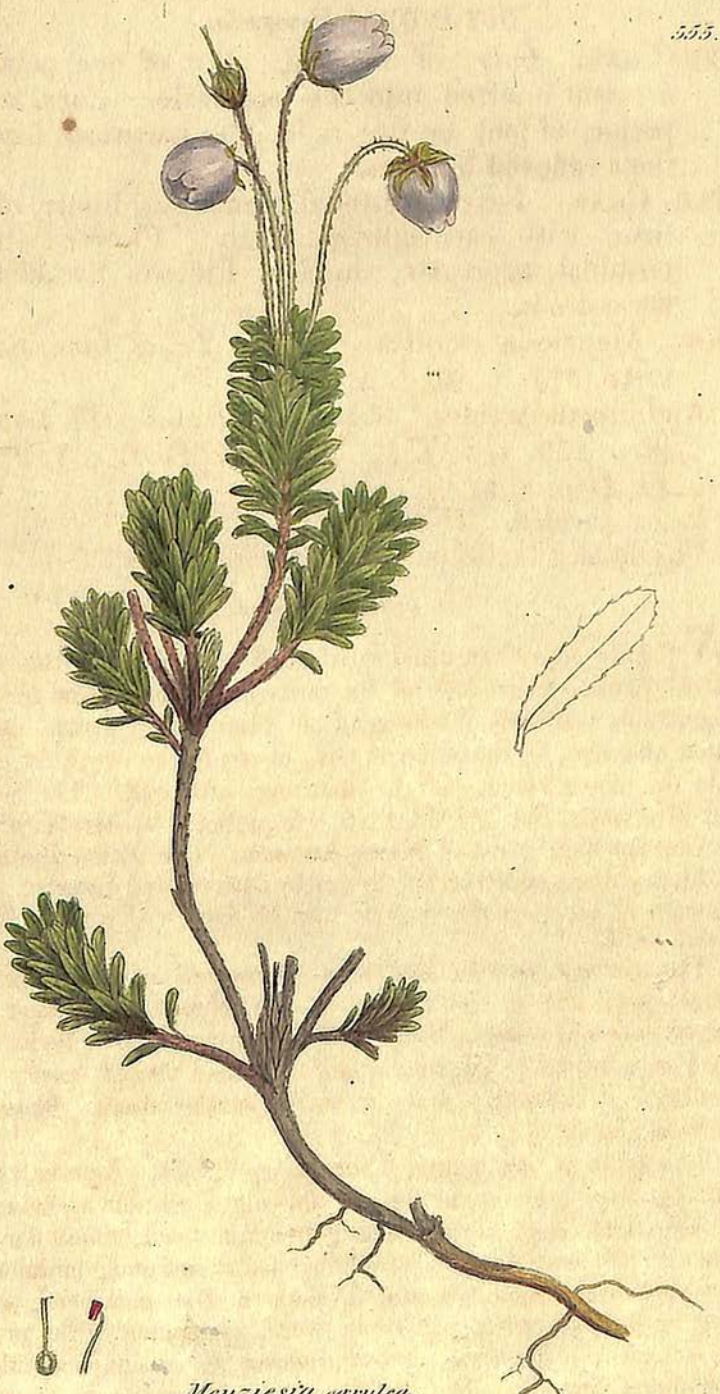
GEN. CHAR. *Partial Involucrum* of five leaves, longer than the umbels. *Petals* inflexed. *Calyx* obsolete. *Fruit* roundish, compressed, striated.

SPEC. CHAR. Partial involucrum of five ovate, awned, three-ribbed leaves; general of three or four. Branches widely spreading. Umbels all stalked. Leaves lanceolate.

SYN. Bupleurum odontites. *Linn. Sp. Pl.* 342. *Sm. Prod. Fl. Græc. Sibth. v.* 1. 177. *Ait. Hort. Kew. ed.* 2. *v.* 2. 121. *Jacq. Hort. Vind. v.* 3. *t.* 91. Perfoliata minima, bupleuri folio. *Column. Ecphr. v.* 1. 84. *t.* 247. *f.* 1, (Perfoliatum angustifolium montanum.)

THIS new addition to the *Flora* of Britain was gathered by the Rev. H. Beeke, D.D. early in July last, on the marble rocks about Torquay, Devonshire, where it is unquestionably wild. We indeed received a very diminutive specimen ten years ago from Devonshire, by favour of the Rev. Aaron Neck, which is subjoined to our principal figure. This last represents the usual wild appearance of the plant. Jacquin's plate gives, with equal exactness, the different habit it assumes in a garden. The Linnæan herbarium contains both on one sheet of paper.

This species is annual, flowering in July. It may easily be distinguished from the other two of British growth, *t.* 99 and *t.* 478. The stem is branched and much divaricated. Leaves lanceolate, acute; the lower ones rather spatulate. The leaves of the general involucrum have five ribs, of which the lateral ones are close together; those of the partial involucrum have usually three, sometimes attended by two more, near the margin. The petals are cream-coloured, with a tinge of red. Anthers yellow, large and conspicuous. The herb is astringent and bitter, rigid and smooth.



Menziesia cærulea.

Oct 1 1813 Published by J.t Sowerby London

MENZIESIA cærulea.

Scottish Menziesia.

OCTANDRIA Monogynia.

GEN. CHAR. *Calyx* of one leaf. *Cor.* of one petal. *Stamens* inserted into the receptacle. *Caps.* superior, of four or five cells; the partitions from their inflexed margins.

SPEC. CHAR. Leaves scattered, numerous, linear, obtuse, with cartilaginous teeth. Flower-stalks terminal, aggregate, simple. Flowers five-cleft, decandrous.

SYN. Menziesia cærulea. *Swartz Tr. of Linn. Soc. v.* 10. 377. *t.* 30. *f.* A.

Andromeda cærulea. *Linn. Sp. Pl.* 563. *Fl. Lapp. ed.* 2. 133. *t.* 1. *f.* 5. *Lapland Tour, v.* 1. 272. *Fl. Dan. t.* 57.

Erica cærulea. *Willd. Sp. Pl. v.* 2. 393.

Phyllodoce taxifolia. *Salisb. Par. t.* 36.

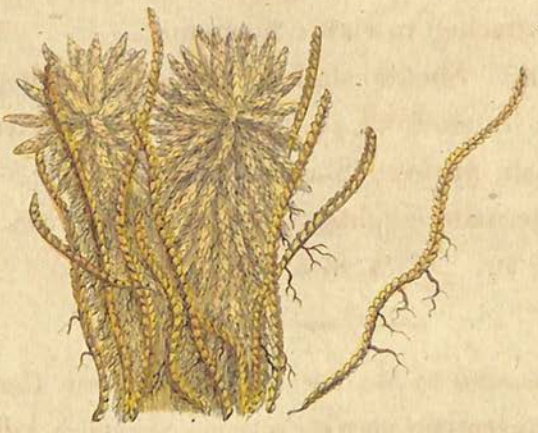
WE have more than usual satisfaction in announcing this as a British plant, on account of its rarity and beauty, and of the opportunity it affords of adding to our Flora a new genus, dedicated long ago, by the writer of this, to one of the worthiest men that the native country of the plant ever produced. The original *Menziesia, Sm. Pl. Ic. t.* 56, was gathered by Mr. A. Menzies on the west coast of North America. Our *Erica Dabecci, t.* 35, has been added to the genus by Jussieu and Swartz. An account of more exotic species may be seen in Tr. of L. Soc. above cited.

The present species has been discovered at Aviemore in Strathspey, and in the western isles of Shiant. We have received native specimens from Mr. G. Don and Mr. P. Neill, and have seen others in gardens about London, though rarely in a condition to blossom. It grows on dry heathy moors, flowering in June and July.

The habit is not unlike *Empetrum, t.* 526. Leaves rather shining above; finely toothed at the edge; rib downy beneath. Flowerstalks long, simple, nearly terminal, red, glandular and downy. Flowers solitary, drooping. Calyx red and glandular, in five deep acute segments, the divisions of that part being different in different species. Corolla ovate, contracted at the mouth, of a blueish or livid red, well answering to the classical idea of *cæruleus*, though Pallas changed the specific name to *taxifolia*, which seems to us less appropriate.

2470

1815.



Jungermannia Sphagni

Oct. 1. 1812. published by J. & A. Arch. Cornhill.

JUNGERMANNIA sphagni.

Bog-moss Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.

Capsule on a stalk rising from a sheath, of 4 valves.

Seeds attached to elastic filaments.

SPEC. CHAR. Shoots slightly branched, creeping. Leaves in two rows, pointing one way, imbricated, roundish, entire. Sheaths lateral.

SYN. Jungermannia sphagni. *Dicks. Crypt. fasc.* 1. 6. *t.* 1. *f.* 10. *With.* 872. *Hull.* 278.

FIRST discovered by Mr. Dickson, in bogs near Croydon, Surrey, growing generally upon the common *Sphagnum palustre*. Our specimens were sent from the New Forest, by Mr. Lyell; but Mr. Dickson alone, amongst all our botanical acquaintance, having seen the fruit, we are obliged to have recourse to his figure, the original drawing of which indeed is in out possession.

This delicate plant creeps over the Bog-moss, like *J. connivens*, *t.* 2436, but in a more erect position, being often quite simple, sometimes furnished with short lateral branches. The leaves are imbricated in two rows, both turned one way, destitute of scales or auricles, sessile, roundish, uniform and entire, of a pale whitish green, with some tincture of red. Sheaths lateral, solitary between the two rows of leaves, near the top or bottom of each shoot, pale, tipped slightly with brown. Capsule and stalk small and delicate.

2471
1978.

Lepraria Jolithus.

Curtis published by Jas. Sowerby London

LEPRARIA Iolithus.

Violet-scented Lepraria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in a powdery substance, loosely clothing a membranous or fibrous crust.

SPEC. CHAR. Crust filmy, greyish. Fructification red, extremely minute, in a thin, even, powdery layer.

SYN. Lepraria Iolithus. *Ach. Meth.* 8. *Turn. & Borr. Lich. Brit. v* 1. 19.

L. rubens. *Ach. Meth.* 6.

Byssus Iolithus. *Linn. Sp. Pl.* 1638. *Lapland Tour, v.* 1. 26. *Huds.* 608. *Hull.* 308.

Lichen Iolithus. *With. v.* 4. 3. *Ach. Prod.* 11.

FOR this specimen, produced on the bark of a tree, we are obliged to Mr. Turner. We have received several from Holywell in Flintshire, as well as from Tunbridge, growing on stones in damp places, of what is presumed to be the same, though of a less powdery and more crustaceous appearance. Both are of the same dull crimson hue, and when moist diffuse a fragrant smell, like violets, or more resembling orris root. This scent is equally strong after the specimens have been long preserved, whenever they are wetted. We have picked up on the shore at Leith quartz pebbles encrusted with the same red substance, but exhaling rather more of a sea-weed odour, still partaking of the orris. How far these are distinct, botanists have not well determined. The present plant has been confounded, as Mr. Turner observes, with our *Conferva lichenicola, t.* 1609, which is abundantly distinguishable by its fibrous jointed texture.

It is no wonder that stones apparently stained with blood, as the above seem to be, should have been made subservient to many a legend in superstitious times. Those at Holywell are supposed to have been sprinkled with the blood of St. Winifred.

2472
1988.

Spiloma punctatum.

Ackermann & Melville, 191 Strand, London.

SPILOMA punctatum.

Dotted Spiloma.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* shapeless, without a border, powdery, in an uninterrupted crust.

SPEC. CHAR. Crust thin, somewhat powdery, white. Receptacles scattered, minute, dot-like, solid, black, with superficial dark brown powder.

SYN. Spiloma punctatum. *Turn. & Borr. Lich. Brit. v.* 1. 40.

GATHERED on old oaks at Coltishall, Norfolk, by Mr. D. Turner, who favoured us with this specimen.

The crust forms small irregular patches, minutely edged with black, and scarcely an inch wide, thin, but of more substance than in some others of the genus, white and slightly powdery on the surface. When rubbed it becomes greenish, like that of many Lichens. Receptacles very numerously sprinkled all over the crust, into which they are sunk, looking like minute black dots. Their substance is solid, as in *S. tumidulum, t.* 2151 *, but greyish internally, with a black external coat, covered with a very minute brownish-black powder.

The solidity of the internal part of the fructification makes the authors above cited doubtful whether this plant should not be referred to Acharius's genus *Arthonia.*

* *S. gregarium. Turn. & Borr. Lich. Brit. v.* 1. 42.

2473.
1899.

Calicium ferrugineum.

Nature published by J. Lowry London

CALICIUM ferrugineum.

Rusty Calicium.

CRYPTOGAMIA Algæ.

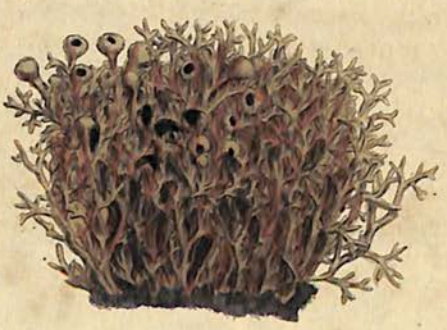
GEN CHAR. *Receptacles* capitate, stalked, totally different in substance and colour from the crust, with a border of their own substance; disk powdery.

SPEC. CHAR. Crust thin, granulated, tartareous, rusty-white. Receptacles on short stalks, thick, black, often compound, with a pale rusty disk.

FOUND by Mr. Turner on pales at Framingham, near Norwich. We are obliged to him for specimens, and for the name under which this decidedly new species is to appear in the *Lichenographia Britannica.*

We think it proper also now to adopt the genus *Calicium,* of which many species have already appeared, as Lichens, in this work. See *t.* 414, 810, 1464, 1465, 1539, 1540, 1832, 1865, 2462. Among all these the *inquinans, t.* 810, comes the nearest to that before us, especially in the crust; but its receptacles are much more sessile, scarcely rising above the inequalities of the crust, and their disk is black, merely a little paler than the margin. The receptacles of the present are smaller, and their disk of a very light rusty or copper brown. Several of them are remarkably compound, or tufted, with small imperfect disks, an accident observable, in some degree, in other species.

2474.
2269.



Spharophoron fragile?

Now published by J. Sowerby London

SPHÆROPHORON fragile.

Brittle Globe Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* nearly globose, terminal, of the substance of the frond. *Seeds* in a dense, black, powdery ball.

SPEC. CHAR. Frond densely tufted, brownish, brittle, cylindrical, repeatedly forked, without lateral branches.

SYN. Sphærophoron fragile. *Ach. Meth.* 135.
S. coralloides β. *Turn. & Borr. Lich. Brit. v.* 1. 111.
Lichen fragilis. *Linn. Sp. Pl.* 1621. *Fl. Suec. ed.* 2. 425. *Ehrh. Crypt.* 128.
L. sterilis. *Ach. Prod.* 211.
Coralloides fragile. *Hoffm. Pl. Lich. v.* 2. 34. *t.* 33. *f.* 3.

COMMUNICATED by Mr. Turner from rocks in Scotland. Being now satisfied of the necessity of separating this genus from *Lichen*, we take this opportunity of giving its characters. Three species only have been found in any part of the world. The habit of them all is no less peculiar than their fructification; shrubby, tufted, polished, more like a coral than a plant, the upper branches elongated, and tipped with large, solitary, nearly globose, balls, of their own substance, opening by an unequal orifice at the top, and displaying a globose mass of black powdery seeds, connected with a firm nucleus.

S. *coralloides*, *Schrad. Spicil.* 112, is our *Lichen globiferus*, *t.* 115, of which Mess. Turner and Borrer make the present a variety. We have always been disposed to think it so; but its regularly forked habit and uniform thickness, without those fine lateral compound branches, seen in our *t.* 115, added to the opinion of Acharius, make us hesitate to unite them.

S. *compressum*, *Ach. Meth.* 135, is our *L. fragilis*, *t.* 114, confounded with the present by Linnæus, but differing from both the above in its white colour, compressed stems, depressed receptacles, and the black fibres intermixed with its seeds.

247.
1*

No 2 was published by Jas Sowerby London

SALICORNIA procumbens.

Procumbent Glasswort.

MONANDRIA Monogynia.

GEN. CHAR. *Calyx* swelling, undivided. *Petals* none. *Stamens* 1 or 2. *Seed* 1, enclosed in the calyx.

SPEC. CHAR. Stem herbaceous, procumbent; interstices obconical. Branches simple. Spikes tapering. Stamens two.

SYN. Salicornia herbacea. *Ehrh. Beitr. fasc.* 7. 178.

VERY common in salt marshes, where the ground is often covered with water, flowering in August.

The root is annual. Stem procumbent, a span long, with several primary divisions at the lower part only. The branches are simple. Joints of the stem notched; the interstices swelling upward, compressed, or rather quadrangular. Spikes tapering. Stamens always two to each germen. Style but slightly divided. Stigmas notched.

Mr. W. Borrer has long remarked this as a new *Salicornia*. Mr. Turner sent specimens to us from the marshes just above Yarmouth. The establishment of this diandrous herbaceous species will serve to account for the differences of opinion among botanists, who have described what they all supposed to be one and the same, whether by the name of *annua* or *herbacea*; but some declared it to be always monandrous, whilst others as positively asserted the presence of two stamens. See *t.* 415; and *Willd. Sp. Pl. v.* 1. 24.

FRAXINUS heterophylla.

Simple-leaved Ash.

DIANDRIA Monogynia.

GEN. CHAR. *Calyx* none, or in 4 deep segments. *Cor.* none, or in 4 deep segments. *Capsule* superior, of 2 cells, leaf-like and compressed at the summit. *Seeds* solitary, pendulous. Some flowers only female.

SPEC. CHAR. Leaves both simple and compound, with tooth-like serratures.

SYN. Fraxinus heterophylla. *Vahl. Enum. v.* 1. 53.
F. simplicifolia. *Willd. Berl. Baumz.* 121. *t.* 3. *f.* 3.
F. excelsior, var. 2. *With.* 57. var. 3. *Hull. ed.* 2. 308.

IN conformity to the wishes of our friends, rather than to our own judgement, we here exhibit, from a cultivated tree, the Simple-leaved Ash, which is, as we are credibly informed, found wild in different parts of England; nor do we doubt this, though we have never met with it. Lamarck, Willdenow, and Vahl have noticed this tree, which differs from the Common Ash, *t.* 1692, in having most of its leaves, not quite all of them, simple, ovato-lanceolate, strongly but unequally serrated, four or five inches long, and supported by long drooping footstalks. Other leaves are three-lobed or ternate, according to Mr. Aiton in *Hort. Kew. ed.* 1. *v.* 3. 445; some are said by Lamarck to be pinnate, of five leaflets. Still we allow this is but a slight approach to the foliage of the Common Ash. The seed is observed in the plant before us to be short and elliptical; but that may be a consequence of weakness, or imperfect impregnation. All that we know of the matter is here submitted to the consideration of English botanists.

Sedum glaucum.

Nunn published by J.s Lewis 3 d.

SEDUM glaucum.

Glaucous Stone-crop.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5, with 5 nectariferous scales at the base of the germen. *Capsules* 5.

SPEC. CHAR. Leaves glaucous, awlshaped, scattered, loosened at the base; those of the branches thread-shaped. Flowers in a cyme. Segments of the calyx lanceolate.

SYN. Sedum glaucum. *Donn. Cant. ed.* 5. 112.
S. reflexum β. *Sm. Fl. Brit.* 490.
S. minus hæmatoides. *Ger. em.* 512. *Raii Syn.* 269.

FOUND by F. K. Eagle, Esq. near Mildenhall, Suffolk, on the southern sides of some small rough hills, most indubitably wild, flowering in July or August. We received specimens through the hands of E. Forster, Esq., who suggests that this is probably what Mr. Haworth, in a late work on Succulent Plants, has marked as the larger variety of *S. glaucum*, the smaller one being more compact, erect, and shorter, in its branches. This last we have not seen, but it is said to be cultivated in some gardens.

The *Sedum* before us differs from *S. reflexum*, *t.* 695, in its more glaucous hue, and more slender leaves, especially those of the branches. We presume it to be the plant of Gerarde, from his figure and description; but whether it be, as the old authors say, usually intermixed with the *reflexum* upon walls; or whether they, as we have always supposed, distinguished as species or varieties the two different stages of growth of that plant, differing only in the posture of the flowers, we are by no means certain. There can however be no doubt of the distinction between our *glaucum* and *reflexum*.

Arctium tomentosa.

Norman published by J. Sowerby London.

ARCTIUM Bardana.

Woolly-headed Burdock.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Cal.* globose, each of its scales terminating in an incurved hook.

SPEC. CHAR. Leaves heartshaped, without prickles, nearly entire, on footstalks. Calyx interwoven with cottony down.

SYN. Arctium Bardana. *Willd. Sp. Pl. v.* 3. 1632. *Donn. Cant. ed.* 5. 193.

A. Lappa β. *Linn. Sp. Pl.* 1143. *Fl. Dan. t.* 642. Lappa major montana, capitulis tomentosis. *Raii Syn.* 197.

PROFESSOR WILLDENOW, whose recent death we have to lament, has asserted in his *Sp. Pl.* that the Woolly-headed Burdock has often been raised by him from seed, and continued constant to its characters. We therefore think it entitled to a place in our work. The fine cobweb down entangled amongst its calyx-scales distinguishes it from our *t.* 1228. The leaves moreover are said to be more entire. It is a very common plant, as well as the other, by way-sides and among rubbish. Ray distinguishes several varieties of each of these species. His *Lappa major montana, capitulis minoribus, rotundioribus, et magis tomentosis,* a north-country variety of the present, we have just received from Mr. Edmund Goodenough, son of the Lord Bishop of Carlisle. The heads are smaller and more depressed; leaves quite entire.

2479
1849.

Jungermannia polyanthos.

Published by J. Sowerby Londo

JUNGERMANNIA polyanthos.

Many-flowered Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.
Capsule on a stalk rising from a sheath, of 4 valves.
Seeds attached to elastic filaments.

SPEC. CHAR. Shoots branched, creeping. Leaves in two rows, spreading, slightly imbricated, roundish, entire, convex. Sheaths lateral.

SYN. Jungermannia polyanthos. *Linn. Sp. Pl.* 1597. *Huds.* 510. *With.* 873. *Hull.* 278. *Lightf.* 773. *Sibth.* 309.
Lichenastrum trichomanis facie, polyanthemum breve et repens. *Dill. Musc.* 486. *t.* 70. *f.* 9.

THIS species of *Jungermannia* grows in moist shady places amongst moss, bearing fruit in the spring, usually in great plenty. It is however not a very common kind. Dillenius had it from Surry. Our specimen was sent from Ballylickey wood in Ireland, by Miss Hutchins to Mr. Turner.

The stems creep on the ground, and are repeatedly branched, slender, but of a firm rigid texture, clothed with round, entire, rather convex leaves, spreading in two ranks, slightly overlapping each other, their base now and then extended into a minute fold or auricle, pressed close to the stem, but this is not regular nor constant. We find also a notch in one or two of the leaves, but that is accidental. The sheaths grow solitary from the middle part of each branch, and have, as in other species, a few imbricated notched scales, or bracteas, at their base.

2480

1874

Jungermannia Hutchinsiæ

Hooker pubd by Jas Sowerby London

JUNGERMANNIA Hutchinsiæ.

Hutchinsian Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.

Capsule on a stalk rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Shoots creeping, branched. Leaves in two rows, spreading, crowded, ovate, toothed, with an inflated side-lobe. Scales cloven, acute. Sheaths in the forks of the branches, inversely heartshaped.

SYN. Jungermannia Hutchinsiæ. *Hooker Brit. Jung. t.* 1.

DISCOVERED by the ingenious lady whose name it bears, at "Glengariff, near Bantry; along the banks of the first river, as you go from Bantry above the water-fall; and in gloomy caverns by the side of other mountain rivulets."

The stems compose dense imbricated patches, of a dark or blackish green, some inches broad, and are repeatedly branched. Leaves crowded, spreading in two rows, flat, ovate, acute, strongly toothed, each furnished at one side near the base with a very singular, obtuse, inflated, pouch-like side-lobe, or auricle: we have preferred the former term, because in the Linnæan phraseology an auricle ought to be a distinct leaflet. Our able friend above quoted uses the latter expression, because the part in question is here so very peculiar, and so unlike a common lobe. The sheaths spring from the forks of the branches, accompanied by two cloven, toothed bracteas, and are obcordate, with a longitudinal ridge at one side. Veil, or corolla, concealed by the sheath. Fruitstalk about twice the length of that part.

2481.

1876.

Jungermannia tamariscı.

Nov 1 1812 published by Jas Sowerby London.

JUNGERMANNIA tamariscina.

Tamarisk Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.

Capsule on a stalk rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Shoots creeping, branched and pinnate. Leaves imbricated in two rows, roundish, convex, entire, with an inflated side-lobe. Scales notched, revolute. Sheaths terminal, obovate, bluntly triangular, smooth.

SYN. Jungermannia tamariscina. *Linn. Sp. Pl.* 1600. *Huds.* 514. *With.* 879. *Hull.* 280. *Lightf.* 782. *Relh.* 439. *Sibth.* 311. *Abbot.* 253. *Hooker Brit. Jung. t.* 6.

Lichenastrum imbricatum, Tamarisci Narbonensis facie. *Dill. Musc.* 499. *t.* 72. *f.* 31.

FOUND abundantly on the ground in rather mountainous heathy countries. We hasten to correct an error, pointed out by Mr. Hooker, in our *v.* 16. *t.* 1086, where *J. dilatata* is figured for the present species. They are nearly akin, and both belong to the curious tribe with inflated side-lobes. Both have two rows of round convex entire leaves, along the upper side of the stem, and an obovate terminal sheath; but in the present species the sheath is smooth, not granulated; the stipulaceous scales are flat, and more cut; the pair of bracteas, or perichætial leaves, acute; and the whole plant is of a more glossy copper-colour. These indications mentioned by Mr. Hooker are the more valuable, as Schreber, Schmidel, Roth and Schrader have misunderstood the two species.

We would substitute the following synonyms for

tab. 1086.

JUNGERMANNIA dilatata.

Dilated Jungermannia.

SPEC. CHAR. Shoots creeping, branched. Leaves imbricated in two rows, roundish, rather convex, entire, with an inflated side-lobe. Scales cut, flat. Sheaths terminal, obovate, triangular, tuberculated.

SYN. Jungermannia dilatata. *Linn. Sp. Pl.* 1600. *Huds.* 514. *With.* 878. *Hull.* 280. *Lightf.* 781. *Relh.* 439. *Sibth.* 311. *Abbot.* 253. *Hooker Brit. Jung. t.* 5.

Lichenastrum imbricatum &c. *Dill. Musc.* 497. *t.* 72. *f.* 27.

This is very common on the trunks of trees.

1863.

Jungermannia setacea.

Published by Jas. Sowerby London.

JUNGERMANNIA setacea.

Bristly Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.
Capsule on a stalk rising from a sheath, of 4 valves.
Seeds attached to elastic filaments.

SPEC. CHAR. Shoots branched, somewhat pinnate, creeping. Leaves imbricated every way, in pairs, awlshaped, incurved. Sheaths lateral, cylindrical, with many capillary teeth.

SYN. Jungermannia setacea. *Weber.* 155. *Hooker Brit. Jung. t.* 8.
J. pauciflora. *Dicks. Crypt. fasc.* 2. 15. *t.* 5. *f.* 9. *With.* 874. *Hull.* 278.
Lichenastrum multiflorum exile, foliis angustissimis. *Dill. Musc.* 481. *t.* 69. *f.* 4; bad.

COMMUNICATED by Mr. Turner. It has been found on bogs in Norfolk and Suffolk, as well as in Ireland, generally among *Sphagnum*, on which the stems creep, being branched in rather a pinnate manner.

This species is nearly related to *trichophylla*, *t.* 2252, but differs in having shorter, incurved, more awlshaped leaves, and lateral sheaths. Mr. Hooker in his specific character by accident says "*fructu terminali.*"

We gladly submit to the change of the original name, for one of nearly equal date, and of far more correct and appropriate meaning, which surely ought to be considered when neither is become popular.

An anther, with its filament, is shown in our plate. It resembles that of a *Sphagnum*.

2483

2222

Gyrophora deusta

No. 1 as published by J. Sowerby, London

GYROPHORA deusta.

Burnt Gyrophora.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Tubercles* sessile on a peltate frond, black, with a plaited contorted disk, in whose clefts the *seeds* are lodged.

SPEC. CHAR. Frond membranous, roundly lobed, brown; upper side more or less granulated; under cellular and reticulated, smooth and naked. Tubercles with circular plaits, at length convex.

SYN. Gyrophora deusta. *Ach. Meth.* 102.

Lichen deustus. *Linn. Sp. Pl.* 1618. *Fl. Suec.* 419. *Ach. Prod.* 145. *With.* 63 ?

L. flocculosus. *Wulf. in Jacq. Coll. v.* 3. 98. *t.* 1. *f.* 3.

L. pustulati varietas singularis. *Linn. Fl. Suec.* 420. *It. W. Goth.* 217 !

Umbilicaria flocculosa. *Hoffm. Pl. Lich. t.* 68. *f.* 1—4.

FOUND on rocks in the Highlands of Scotland, many years ago, by Mr. Dickson. Our specimen was gathered on Ben Cruachan by Mr. W. Borrer; that in fructification came from Dr. Swartz. The plant is very common in Sweden, and appears, by an authentic specimen, to be what Linnæus intended. When it grows on perpendicular moist rocks, it most frequently becomes covered on the upper side with minute scales or leaflets, as Linnæus found it in West Gothland; but these are only dilatations of the granulations which it usually bears. The under surface is naked and smooth, but not even, being more or less distinctly marked with veiny reticulations, with pits between. Both sides are of a lurid blackish brown, somewhat rusty, but not olive. The frond is often a little compound; its circumference roundly lobed or crenate. Tubercles quite sessile, very black and opaque, a little convex, with several convolutions of the disk, partly concentric, partly folded, but there is usually a regular circular outline, or rim.

2484

2220

Gyrophora proboscidea?

Nunn sculpt. published by J.e Sowerby London

GYROPHORA proboscidea.

Proboscis Gyrophora.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Tubercles* sessile, on a peltate frond, black, with a plaited contorted disk, in whose clefts the *seeds* are lodged.

SPEC. CHAR. Frond membranous, notched; upper side rugose, with elevated reticulations, of a smoky ash-colour; under smooth, naked and paler. Tubercles top-shaped, prominent; their disk at length rather convex, variously plaited.

SYN. Gyrophora proboscidea. *Ach. Meth.* 105.
Lichen proboscideus. *Ach. Prod.* 147.
L. mesenteriformis. *Ehrh. Crypt.* 89.
L. decussatus. *Villars. Dauph. v.* 3. 964. *t.* 55.
L. deustus. *Lightf.* 861.
Umbilicaria corrugata. *Hoffm. Pl. Lich. t.* 43. *f.* 4—7.

NOT rare on the granite rocks of the Highlands, nor in the north of England and Wales, generally accompanying our *t*, 522, which is *G. cylindrica* of Acharius. We can however assure those who are interested in the matter, that the real *Lichen proboscideus* of Linnæus, so fully described in Sp. Pl. ed. 1. 1150, is, beyond all doubt, a specimen of our *t*. 522, as nearly destitute of fringe or hairs as the plant in our present plate. We assent nevertheless to the *cylindricus* of Linnæus, Sp. Pl, ed. 1. 1144, (to which Montin applied a most erroneous synonym of Dillenius,) being also our *t*. 522. Linnæus has justly noted in his own copy of Sp. Pl. that the Lichens in question are one and the same species. The present indeed is more corrugated in its upper surface, the other more furnished with warty pustules, as well as incomparably more fringed. The tubercles vary in degree of elevation, and the names of *proboscideus* and *cylindricus* are nearly equally unsuitable to the general form of both, though well answering to the Linnæan specimen. We publish these remarks, and the annexed plate, for the sake of illustration, as so many botanists have separated these plants, which appear to us varieties only, and for both which we would retain the name of *Gyrophora proboscidea*. See Winch, v. 2. 43.

2465.

2221.

Gyrophora arctica?

Dec. 1. 1823. published by J. & A. Arch, Cornhill.

GYROPHORA arctica.

Arctic Gyrophora.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Tubercles* sessile, on a peltate frond, black, with a plaited contorted disk, in whose clefts the *seeds* are lodged.

SPEC. CHAR. Frond coriaceous, rigid, thick, wavy and folded; upper side with tortuous plaits and elevated points, ash-coloured; under very smooth, paler. Tubercles at length globose, copiously plaited.

SYN. Gyrophora arctica. *Ach. Meth.* 106. *t.* 2. *f.* 6.

THIS is here admitted as a British species, on the authority of a specimen, the uppermost in our plate, obtained by Mr. Turner from the herbarium of the late Mr. Hudson, who probably collected it in Devonshire. The other was sent by Dr. Wahlenberg from Norway, and leaves no doubt as to the identity of the species, though its under side displays none of that yellowish-white hue mentioned by Acharius.

Wahlenberg himself doubts whether this *Gyrophora* be really distinct from *proboscidea*; see *t.* 2484, though he allows its appearance to be altogether different. The substance of the frond is more thick, rigid, and tenacious; the upper surface more obtusely corrugated, and besprinkled with warts. By age it becomes entirely black above, and still more unequally rugged, with reflexed edges. It varies from an inch and half, to two inches, or more, in diameter. The tubercles become elevated when old. They are abundant, and formed of numerous contorted plaits. We are most inclined to believe this one species with *G. cylindrica* and *proboscidea*, some German specimens of which in our possession seeming to come very near what is above described.

2486.
2225.

Gyrophora murina?

Dec. 1st published by J. & A. Arch, Cornhill, London

GYROPHORA murina.

Mouse-skin Gyrophora.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Tubercles* sessile, on a peltate frond, black, with a plaited contorted disk, in whose clefts the *seeds* are lodged.

SPEC. CHAR. Frond membranous; its margin plaited, wavy and somewhat lobed; minutely granulated on both sides; glaucous grey above; blackish brown beneath. Tubercles scattered, somewhat bordered, much convoluted.

SYN. Gyrophora murina. *Ach. Meth.* 110.
Lichen murinus. *Ach. Prod.* 143.
L. griseus. *Ach. in Act. Holm. ann.* 1794. 91. *t.* 2. *f.* 3.
L. pulmonarius saxatilis, cinereo-fuscus, minimus. *Vaill. Paris.* 116. *t.* 21. *f.* 14. *Sm. Tour, ed.* 2. *v.* 1. 108.

COMMUNICATED by Mr. Turner, but the specimens are exotic. We know not the precise place of growth of this species in Britain, though we have it from Sweden, Switzerland and France. It may be what Dare found on St. Vincent's rocks, and if so, it is *L. Dillenii, With. v.* 4. 63; which we are the more inclined to believe, as Mr. Turner, in Tr. of L. Soc. v. 7. 112, asserts it to be *t.* 30. *f.* 117, of Dillenius. We indeed, on consulting the herbarium at Oxford, found his *f.* 117, to be *polyrrhizos* of the Linnæan herbarium, *Gyrophora hirsuta* of Acharius, and the true *Lichen spadochrous* of Ehrhart; nor can we account for the assertion of our learned friend, but by supposing, as Dillenius certainly confounded the two, they may both be placed together in his collection.

G. murina is a very distinct species, from one to two inches broad; black, without fibres, beneath, finely granulated with pale cartilaginous warts, like shagreen; browner towards the edge. The upper side is grey, very minutely cracked, without veins or plaits; white and mealy in the middle. Tubercles rare, minute, seldom perfectly plaited, though Acharius did ascertain them to be so. We have some from Switzerland, in the state which led him to refer the plant to *Endocarpon*.

Chorda Filum.

FUCUS Filum.

Thread Fucus, or Sea Laces.

CRYPTOGAMIA Algæ.

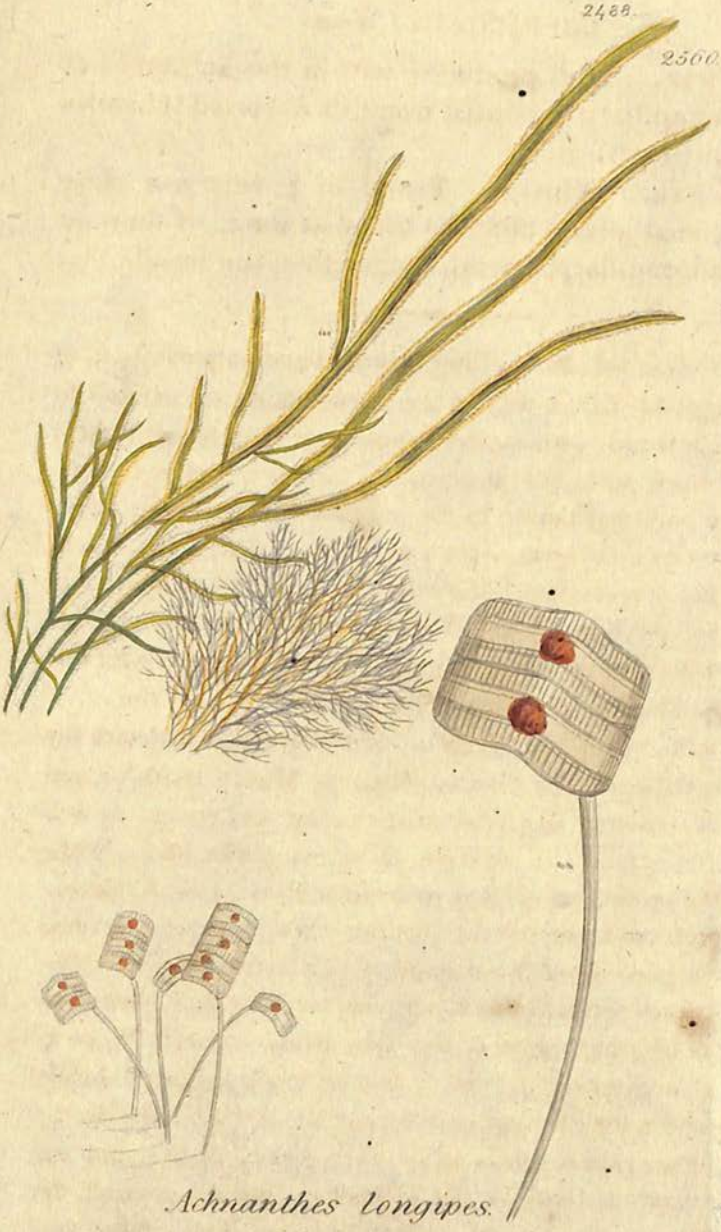
GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, slimy, thread-shaped, tapering at both ends, perfectly simple, tubular, with occasional internal transverse partitions; spirally twisted when old.

SYN. Fucus Filum. *Linn. Sp. Pl.* 1631. *Huds.* 587. *With. v.* 4. 108. *Hull.* 324. *Gooden. & Woodw. Tr. of Linn. Soc. v.* 3. 193. *Turn. Syn.* 338. *Hist. Fucor. v.* 2. 37. *t.* 86. *Stackh. Ner.* 40. *t.* 10. *Lightf.* 963.

F. chordam referens teres prælongus. *Raii Syn.* 40.

EVERY part of the British coasts in general affords this Fucus. The root is a very small callous disk, suspected by Mr. Turner to be annual. Fronds either solitary, or two, three, or four together, from one to twenty feet long, perfectly unbranched, threadshaped, slimy, olive-coloured, about a quarter of an inch in diameter at the thickest part, tapering at both ends. The central part is tubular, generally filled with watery mucus, and interrupted by frequent, more or less complete and regular, transverse membranes. The coat itself is thick but not very tough, highly cellular, or composed of interrupted tubes. In September Mr. W. Borrer found the outside to be covered with minute stalked granules, each containing an apparent seed. These are at length deciduous. They seem to have been observed by Mr. Pigott, as related by Mr. Turner in his *Historia*, and we cannot but consider them as the fructification. Much of the frond is often clothed with jointed whitish fibres, like fine hairs, which have all the aspect of a parasitical *Conferva*.



Achnanthes longipes.

Drawn & published by J. Sowerby London

CONFERVA stipitata.

Stalked Striated Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Whitish. Frond of a very few close striated joints, twice as broad as long. Common stalk capillary, lateral, longer than the frond.

HAVING in vol. 26, t. 1869, figured a marine production, of whose vegetable nature we had then no doubt, we are induced to present our readers with another, whose great resemblance thereto will, we trust, prove our justification, though it excites a suspicion that both may belong to the animal kingdom. This suspicion arises from the scent of the present plant when burnt, which is like that of a coralline; the earthy residuum being also, as in that tribe, very abundant. With this caution, for the consideration of those who may follow us, we for the present refer this curious production to the vegetable kingdom.

It was found in July 1812, in clear rills which intersect the mud, on the coast near Southampton, by Miss S. Biddulph and Miss Hill, covering *Conferva ærea*, *rubra*, and others, as well as *Ulva compressa*, giving them an almost golden hue. When dried, the production in question assumes a pale, greyish, mucor-like aspect, and feels soft like cotton. When highly magnified the whole mass is found composed of innumerable distinct individuals, each supported on a very fine capillary stalk, and consisting of one, two, three or four close joints, twice or thrice as broad as long, rather pointed or angular upwards, longitudinally striated, with the interruption of a plain transverse band. In the centre is a round red mass of apparent seeds. If this, and our *C. obliquata*, *t.* 1869, be not *Confervæ*, they are probably the eggs of some marine insect, rather than a coralline. That they are both of the same nature nobody can doubt.

Utricularia intermedia.

UTRICULARIA intermedia

Intermediate Hooded-Milfoil.

DIANDRIA Monogynia.

GEN. CHAR. *Cal.* of two equal leaves. *Cor.* ringent, spurred. *Capsule* superior, of one cell.

SPEC. CHAR. Nectary conical. Stalk two- or three-flowered. Upper lip flat, twice as long as the palate. Leaves crowded, in three deep forked segments.

SYN. Utricularia intermedia. *Hayne in Schrad. Journ. for* 1800. 18. *t.* 5. *Vahl Enum. v.* 1. 198.

U. vulgaris minor. *Linn. Sp. Pl.* 26. *Fl. Suec.* 9.

FOUND by the late Dr. Scott near Dublin, and by Miss Hutchins in the west of Ireland; we know not of its having been observed in Britain. Linnæus says it grows along with the *U. vulgaris, t.* 253, in Sweden, nor did he distinguish them as species; at which we cannot but wonder. The present is remarkable for the long leafy branches, and comparatively small number of air-vessels. Each leaf is deeply divided into three parts, and those are variously and repeatedly forked; all the segments linear, acute, slightly fringed. The slender stalk bears but two, or at most three, flowers, which are smaller than those of the *vulgaris*, with a flatter upper lip. These having never been found in Ireland, Mr. Sowerby has been obliged to copy them from a plate in a German work published by Dreves and Hayne. We received a perfect specimen from the last-named botanist, through the hands of Dr. Schrader, in whose *Journal* this species is described; but the volume which contains it not having reached us, we trust to Vahl for the above reference.

2490.
713.

Rosa microantha.

ROSA micrantha.

Small-flowered Sweet Briar.

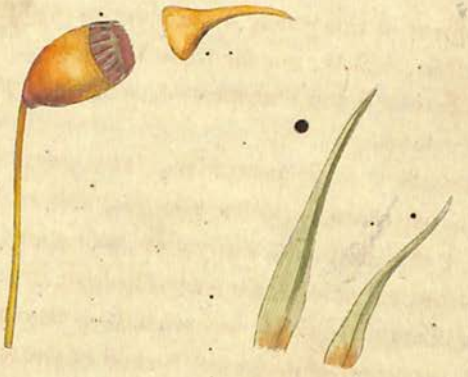
ICOSANDRIA Polygynia.

GEN. CHAR. *Cal.* urnshaped, fleshy, contracted at the orifice, terminating in 5 segments. *Petals* 5. *Seeds* numerous, bristly, fixed to the inside of the calyx.

SPEC. CHAR. Fruit ovate, somewhat bristly, as well as the flower-stalks. Stem straggling, with scattered hooked prickles. Leaflets ovate, acute, clothed beneath with rusty-coloured glands.

MR. W. BORRER has communicated to us the present Rose, under the above name. He observes that it is common in hedges and thickets, and is nearly related to *R. rubiginosa*, *t.* 991, but much less prickly, less bushy, and more like *canina*, *t.* 992, in mode of growth. The leaflets are less rounded, less rusty beneath, and not so fragrant as those of *rubiginosa*. Flowers smaller and paler, being less than in any other British Rose. Fruit with a more gradual neck, not of the pear-like shape usual in that species. It varies in roughness. The footstalks, and backs of the leaves, are downy as well as glandular.

We are well aware of this species, or variety, whichsoever it may be judged, and we recommend gardeners, and planters of hedges, to be on their guard against it, as much inferior to the true Sweet Briar in scent and compactness, as well as in the beauty of its blossoms. It is much the most common of the two; but those who force Sweet Briar about London, have generally taken care to procure the right sort. In the character of our *t.* 991, the fruit should be defined *obovate*.



Lowe ad. del. et lith. by J. Hockney, Leeds.

DICRANUM pusillum.

Dwarf Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stem simple. Leaves capillary, ribless, nearly upright. Capsule ovate, inclining, with a slight prominence on one side at the base.

SYN. Dicranum pusillum. *Hedw. Sp. Musc.* 139. *Crypt. v. 2.* 80. *t.* 29, B. *Sm. Fl. Brit.* 1219. *Swartz Musc. Suec.* 38. *Sibth.* 282.

Bryum parvulum. *Dicks. Crypt. fasc.* 3. 7. *With.* 832. *Hull.* 263.

OUR specimens of this pretty little Moss were gathered by Mr. Turner at Belton, Suffolk, not far from Yarmouth. The same is found also in Scotland and Oxfordshire, as well as probably elsewhere in this island.

Hedwig asserts it to be perennial. The stems are a line or two only in height, forming dense patches, unbranched. Leaves spreading very slightly in every direction, pale green, brown when old, very narrow, concave, or somewhat keeled, at the base, where they are considerably dilated; but we believe they have no actual rib or nerve, whatever appearance the fold of the keel may sometimes give. Fruitstalks very slender, shining, sheathed at the base, yellowish, turning black with age. Capsule ovate, abrupt, turned to one side, pale brown, smooth, with a small reddish tumour at the base on the under side. Lid with a taper curved beak, as long as the capsule. Fringe large in proportion, of a fine red.

The flowers are said to be produced in autumn; which is very probable, as the capsules are found with us in the early spring.

2492

1603.

Dicranum
latifolium.

Drawn & published by J.C. Sowerby London

DICRANUM latifolium.

Broad-leaved Hairy Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stem simple, short. Leaves elliptic-oblong, concave, hair-pointed. Capsule erect, cylindrical, somewhat ovate. Lid awlshaped, short.

SYN. Dicranum latifolium. *Hedw. Sp. Musc.* 140. *Crypt. v.* 1. 89. *t.* 33. *Turn. Musc. Hib.* 79; excluding Dickson's syn.

GATHERED by the late Dr. Scott, upon banks in Ireland. The original specimens of *D. latifolium* were given to the younger Linnæus by Mr. Dickson, and came from North America, not from Lapland. The counter part of these remain in the Linnæan herbarium.

Hedwig, by attending to the stems, which though very short are not all of one year's growth, judged this moss to be perennial. They compose dense tufts. The leaves are crowded, light green, a little spreading, elliptical and rather oblong, concave, entire, slightly revolute, their strong midrib ending in a long white hair. When dry they become twisted or folded together. Fruitstalks solitary, an inch long, tawny, shining, twisted when dry. Capsule erect, nearly cylindrical, or slightly ovate, smooth, light brown. Lid conical, blunt, nearly straight, about a quarter the length of the capsule; Mr. Turner by mistake describes it of equal length. The fringe is so pale, delicate, and deeply cloven, that this excellent botanist rightly judges it rather to indicate a *Trichostomum*. We retain the plant in *Dicranum* merely out of deference, in a doubtful question, to so great a man as Hedwig. We cannot agree with Mr. Turner as to this being *Trichostomum piliferum* of *Fl. Brit.* the capsule of which is very short, and the leaves taper-pointed.

2493
1665.

Didymodon flexifolius.

Drawn by [illegible]

TRICHOSTOMUM flexifolium.

Wave-leaved Fringe-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 32 capillary, straightish teeth, approximated or united in pairs.

SPEC. CHAR. Leaves oblong, sheathing, waved; serrated in their upper part. Capsule cylindrical, somewhat ovate. Stem branched at the base.

SYN. Trichostomum? flexifolium. *Sm. Fl. Brit.* 1246.

Bryum flexifolium. *Dicks. Crypt. fasc.* 3. 5. *t.* 7. *f.* 9. *With.* 815. *Hull.* 258.

FOUND on barren sloping ground, near Croydon, Surrey, by Mr. Dickson, and, as far as we can learn, by no other person. Our only resource therefore is one of his specimens in Mr. Turner's hands, the same described in *Fl. Brit.*

The roots are presumed to be perennial. Stems tufted, divided from the very base into several lax branches, scarcely half an inch high. Leaves of a light bright green, imbricated, spreading, ovate-oblong, concave, waved or twisted, keeled, single-ribbed, pointless; sheathing and entire in their lower part; serrated towards the extremity. Fruitstalks solitary from the tops of the branches, erect, capillary, straw-coloured, not an inch long. Capsule cylindrical, somewhat ovate, striated, nearly erect. Lid conical, curved, the length of the capsule. We have never seen the fringe, and therefore judge of the genus by habit alone.

2494

1655

Tortula unguiculata

Pubd as published by J. Sowerby London

TORTULA apiculata.

Small-tipped Screw-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of numerous capillary teeth, spirally and repeatedly twisted together.

SPEC. CHAR. Stem simple, rather short. Leaves rather distant, oblong-lanceolate, minutely pointed, spreading. Capsule oblong. Lid beaked.

SYN. Tortula apiculata. *Turn. Musc. Hib.* 46.

Barbula apiculata. *Hedw. Sp. Musc.* 117. *t.* 26. *f.* 1—3.

GATHERED by Dr. Stokes at Killesandra in Ireland, growing on the ground. Mr. Turner found it sufficiently agree with Hedwig's Pennsylvanian moss, cited above; which is not the only instance of such a coincidence between the botany of those two countries.

The stems are from two lines to half an inch high, erect, slender, clothed loosely with more or less spreading leaves, of a linear-oblong form, bluntish, entire, concave, keeled and single-ribbed, tipped with a little short point, which is an elongation of the rib. When dry they are incurved, but hardly twisted. Fruit-stalk terminal, solitary, purplish, an inch long, not quite straight. Capsule oblong, upright, cylindrical when quite ripe. Fringe crimson, half as long as the capsule. Lid the length of the latter, according to Hedwig, and slightly incurved.

Jas. Sowerby published by J. & J. Sowerby, Jun.

TORTULA ericetorum.

Curling Heath Screw-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of numerous capillary teeth, spirally and repeatedly twisted together.

SPEC. CHAR. Stem branched. Leaves lanceolate, acute, twisted when dry; the uppermost stellated. Capsule cylindrical, slightly ovate.

SYN. Tortula ericetorum. *Sm. Fl. Brit.* 1258.

Bryum ericetorum. *Dicks. Crypt. fasc.* 2. 5. *With.* 826. *Hull.* 261.

B. ruralis facie, foliis minoribus et non pilosis. *Dill. Musc.* 354. *t.* 45. *f.* 13.

FOUND on turfy heaths in Scotland by Mr. Dickson, from whose specimens we have delineated it. The stems are branched, upright, tufted. Leaves crowded, spreading, lanceolate, narrow, concave, entire, acute, with a strong, pale or yellowish, nerve, but no extended point or hair; when dry they curl and bend inwards. The uppermost are drawn by Dillenius much more large and spreading than we have found them in Mr. Dickson's plant, or in his own at Oxford. Fruitstalk scarcely an inch high, brownish red, terminal, though the branch is often subsequently extended above its insertion. Capsule erect, cylindrical inclining to ovate, abrupt, brown, shining and very smooth. Fringe very brittle. We know nothing of the lid or veil.

Dillenius had this moss from Patagonia, nor did he know of it as a native of Europe; yet we find no reason to doubt his synonym.

Hypnum subtile.

London Published by J. & A. Arch, Cornhill.

HYPNUM subtile.

Slender Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

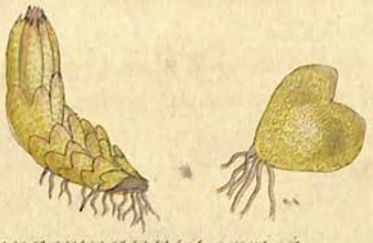
SPEC. CHAR. Stem creeping, with slender thread-shaped branches. Leaves lanceolate, acute, ribless, rather loosely spreading. Capsule erect. Lid conical.

SYN. Hypnum subtile. *Hoffm. Germ. v.* 2. 70. *Dicks. Crypt. fasc.* 4. 17. *Sm. Fl. Brit.* 1277. *Turn. Musc. Hib.* 135.

Leskea subtilis. *Hedw. Sp. Musc.* 221. *Crypt. v.* 4. 23. t. 9.

WET situations, about the roots of trees, and watery gravelly heaths, produce this moss, but the capsules do not often occur in England. We are obliged to take them from a German specimen of Mr. Turner's. The very slender, creeping, entangled stems throw up numerous, erect, short, extremely slender, round, almost always simple, branches, composing fine matted tufts. The leaves are light yellowish green, loosely clothing the branches, spreading every way, lanceolate, very acutely pointed, entire, destitute of rib or veins; and the scales of the sheath are like them, but more concave; both appear reticulated, with oblong interstices, under a microscope. The fruitstalks are capillary and reddish, hardly an inch high, ascending. Capsule either quite erect, or, when ripe, sometimes slightly inclining, cylindrical, wide-mouthed, quite smooth and even, light brown. Lid conical, short and reddish, according to Hedwig, who, finding the inner fringe with 16 simple equal teeth, refers this moss to his *Leskea*, a genus we do not adopt.

2497.
1824.



Jungermannia excisa.

Jan'ry 1st published by J. Sowerby London

JUNGERMANNIA excisa.

Notch-leaved Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Creeping, prostrate, scarcely divided. Leaves spreading, almost square, deeply emarginate. Sheaths terminal, pale, oblong; plaited and toothed at the margin.

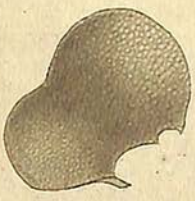
SYN. Jungermannia excisa. *Dicks. Crypt. fasc.* 3. 11. *t.* 8. *f.* 7. *With.* 879. *Hull.* 280. *Hooker Brit. Jung. t.* 9.

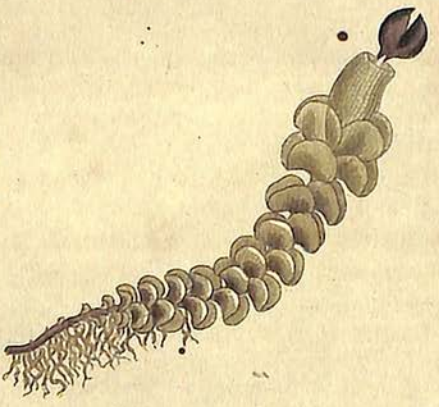
COMMUNICATED by Mr. Turner, from Holt heath, Norfolk, where it was observed to abound, in wet places, by the Rev. Mr. R. B. Francis. Mr. Hooker found it plentiful near Norwich and Yarmouth, on hedge banks and heathy ground, as well as in the Highlands of Scotland.

Though one of the smallest of its genus, *J. excisa* often composes scattered patches several inches wide. Each plant lies prostrate, creeping, and firmly attached to the earth, by numerous fibrous roots, being usually simple and about half an inch long, sometimes branched, or at least divided. The leaves are closely imbricated in two rows, nearly square, having a broad base; but the extremity has a deep sinus, or acute notch, between two short, distant, bluntish points. The edges are quite entire. There is a variety with more dilated, crumpled, and irregularly shaped foliage, apparently from luxuriance. The sheaths are terminal, solitary, large, oblong, irregularly furrowed or plaited lengthwise, especially at the summit, where they are consequently much contracted, as well as irregularly and sharply toothed. The fruitstalk is shortish. Capsule rather small. The whole plant often assumes a reddish, or a dark brown, hue, but the pale and large sheaths are very conspicuous. Mr. Hooker observed the two uppermost leaves to have generally three teeth.

2498

18.38.





Jungermannia resupinata

JUNGERMANNIA resupinata.

Curled Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

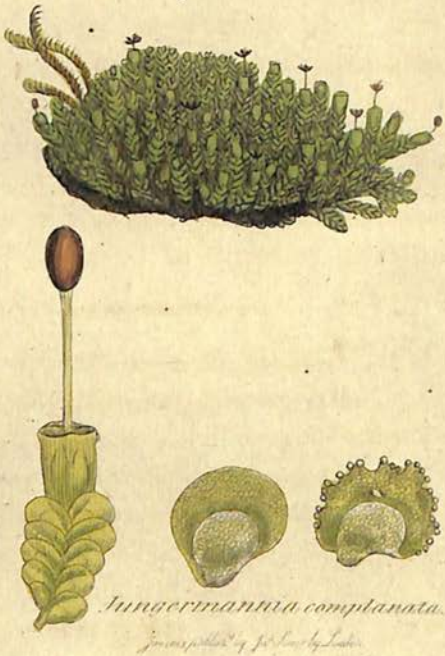
SPEC. CHAR. Procumbent, scarcely branched. Leaves two-ranked, rounded, entire, in two nearly equal lobes folded vertically together. Sheaths terminal, oblong, incurved, compressed, abrupt, nearly entire.

SYN. Jungermannia resupinata. *Hooker Brit. Jung. t.* 23; excluding the synonyms. *Linn. Fl. Suec.* 400?

WE are obliged to Mr. Turner for these specimens, gathered at Herringfleet, near Yarmouth; and to Mr. Hooker for determining our *t.* 2437 to be but a variety of *J. nemorosa*, *t.* 607. That *t.* 2437 however, being the plant of Dillenius, *t.* 71. *f.* 19, is unquestionably what Linnæus intended in *Sp. Pl.*, as the character also shows; though the original definition in the *Fl. Suecica* accords better with our present plant. There is nothing in the Linn. Herbarium to help us here. From Mr. Hooker's accurate inquiries, it is evident none of the synonyms he quotes have the shadow of authority, but rather are manifestly wrong. Still, in this dilemma, we readily concur with him in establishing the present very clear species as *J. resupinata*, there being no other distinct one.

It grows in a loamy soil; not unfrequently "under the trailing stems of *Ericæ*," bearing capsules in May and June, after flowering in the early spring. The stems, above half an inch long, form dense tufts, especially when fertile, creeping by numerous radicles. Leaves yellowish-brown, two-ranked, deflexed, of two, nearly equal, folded, roundish lobes, entire, except here and there a small tooth on the upper ones. Sheath terminal, compressed upward, curved, especially before the capsule protrudes; the orifice abrupt, minutely crenate. It seems Dr. Withering and ourselves have been misled concerning *J. purpurea*, our *t.* 1023 being also *nemorosa*; and further, that the fructified specimen of *undulata*, *t.* 2251, (not 225,) is perhaps *scalaris*. We gratefully acknowledge the communications and corrections of our friends; but that specimen came separately named from the same high authority, and we supposed its fruiting might cause the apparent difference.

2499.
1845



Jungermannia complanata.

James pinxit & ft. Sowerby Londini

JUNGERMANNIA complanata.

Flat Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Much branched, procumbent, depressed. Leaves two-ranked, rounded, entire; their side-lobes of the same shape, not half so large. Sheaths terminal, compressed, abrupt, entire.

SYN. Jungermannia complanata. *Linn. Sp. Pl.* 1599. *Huds.* 514. *With.* 878. *Hull.* 280. *Lightf.* 780. *Relh.* 439. *Sibth.* 311. *Abbot.* 253. *Curt. Lond. fasc.* 4. *t.* 68. *Ehrh. Crypt.* 97.

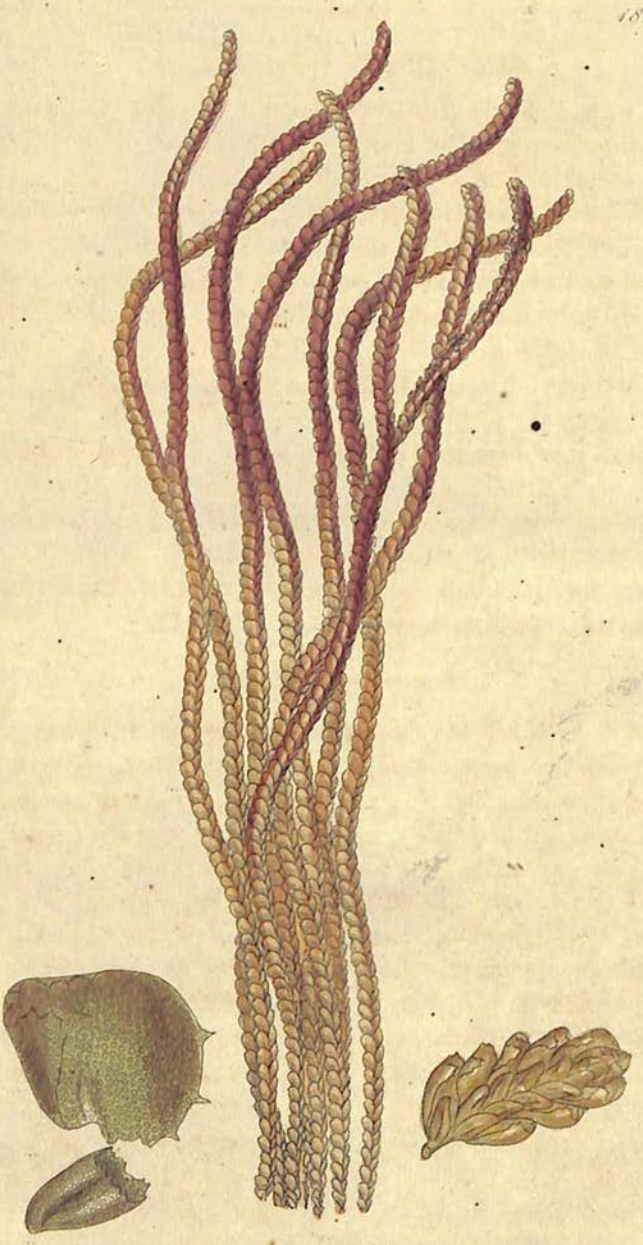
Lichenastrum imbricatum majus, squamis compressis et planis. *Dill. Musc.* 496. *t.* 72. *f.* 26.

L. imbricatum majus. *Raii Syn. ed.* 3. 111; excluding the synonym of Bobart.

ABUNDANT on the trunks of trees, in woods and thickets, every where, bearing capsules plentifully in April and May.

This species composes broad dense patches, or cushions, of a light grass-green hue, entangled with mosses, and other plants of the same kind, their forms and colours being often elegantly and richly contrasted. Its shoots are repeatedly branched, the branches spreading, but all flat and depressed, like the foliage, which consists of two opposite rows of imbricated, almost orbicular, entire, slightly convex leaves, each furnished underneath with a close-pressed side-lobe, of their own form, but scarcely half so big. Some few leaves are bordered with granular buds. The copious sheaths grow solitarily at the ends of the branches, being about thrice as long as the leaves, somewhat bell-shaped, compressed upward, the margin abrupt, inflexed and entire. Fruit-stalk usually twice the length of the sheath.

2500
1844



Jungermannia cochleariformis.

Published by J. & C. Smith, London

JUNGERMANNIA cochleariformis.

Spoon-leaved Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Nearly upright. Leaves two-ranked, imbricated, folded together, roundish, concave, somewhat toothed. Auricles pouch-like, oblong.

SYN. Jungermannia cochleariformis. *Weis Gott.* 123. *With.* 876.

J. purpurea. *Scop. Carn. v.* 2. 347. *Lightf.* 778. *Hull.* 279.

Mnium jungermannia. *Linn. Sp. Pl.* 1579. *Huds.* 473.

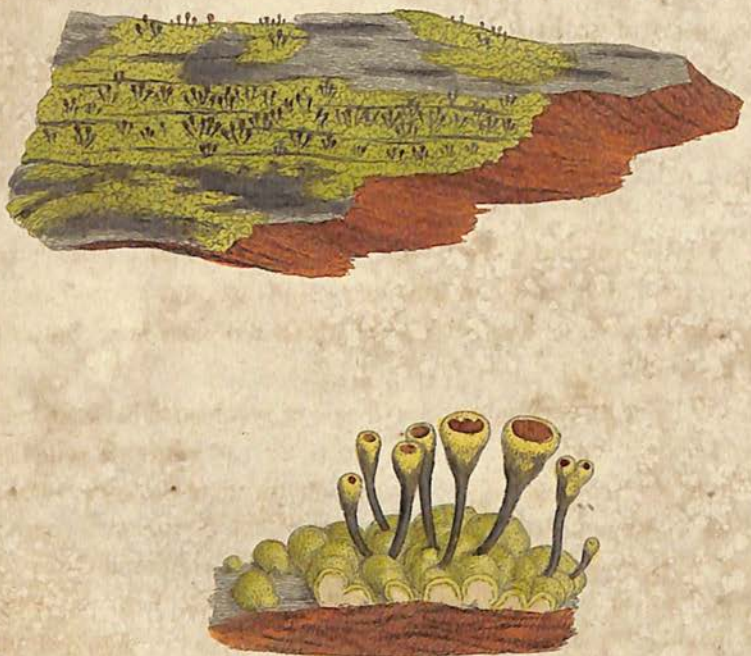
Lichenastrum alpinum purpureum, foliis auritis et cochleariformibus. *Dill. Musc.* 479. *t.* 69. *f.* 1.

L. trichomanis facie prælongum, foliis concavis unam partem spectantibus. *Raii Syn.* 112.

AS our *t.* 1023 proves only an alpine purple variety of *nemorosa*, see *p.* 2498, we have obtained the intended plant, gathered by Miss Hutchins near Bantry; and at the same time we restore the original name given by Weis, whose prior authority we did not before perceive, owing to Withering's neglect of reference to him.

This is a very fine and remarkable species, sometimes a span high or more, forming dense tufts in alpine bogs, and being mostly simple, clothed entirely with purple or brownish leaves, imbricated in two rows, but all directed to one side. Their form is roundish, but irregular, concave, unequally toothed, chiefly at the extremity. Each is accompanied at its base by an oblong pouch-like appendage, akin to those of *J. Hutchinsiæ*, *t.* 2480, and *tamariscina*, *t.* 2481, but mostly, though perhaps not always, distinct, so that it may well be termed an auricle. The younger plants have flatter leaves, without such accompaniments. We lament having never seen the fructification, of which Dillenius was likewise ignorant. Linnæus had no pretence to make this plant a *Mnium*.

2501
1902



Calicium chrysocephalum.

Jan. 1.1812 published by J.& J. Sowerby London.

CALICIUM chrysocephalum.

Gold-headed Calicium.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* capitate, stalked, totally different in substance and colour from the crust, with a border of their own substance; disk powdery.

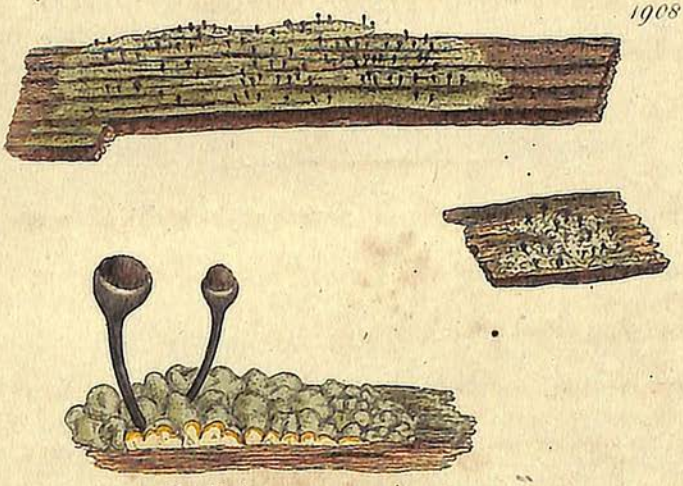
SPEC. CHAR. Crust granulated, indeterminate, dispersed, pale yellow. Receptacles on black stalks, pear-shaped, yellow towards the border, with an orange-brown disk.

SYN. Calicium chrysocephalum. *Ach. Meth. suppl.* 15. Lichen chrysocephalus. *Turn. Tr. of Linn. Soc. v.* 7. 88. *t.* 8. *f.* 1.

THIS beautiful species, which places beyond all doubt the true nature of the crust and fructification of its genus, was found by Mr. Turner, its original describer, on old pales near Sotterley, in Suffolk.

The crust generally grows in oblong patches, about four inches in extent one way and two the other, of a bright, sometimes greenish, yellow, very much resembling some common Lichens, till it is submitted to a microscope, when it proves to consist of globose granulations, crowded or dispersed, internally of a dull buff-colour. These bear numerous little stalks, a line or more in height, capillary, of a shining brownish black. Each supports one, rarely two, pear-shaped flat-topped heads, black at their base, bright yellow upwards, especially at the margin; their disk occupied with powder of a dull orange-colour. When old, and the powder or seed is gone, the receptacles remain hollow and black, till they themselves break off and leave the naked stalks. Mr. Turner occasionally met with some heads almost sessile, and clustered together.

2502.
1908



Cidicium aruginosum.

Just published by Jas. Sowerby London.

CALICIUM æruginosum.

Verdigrise Calicium.

CRYPTOGAMIA Algæ.

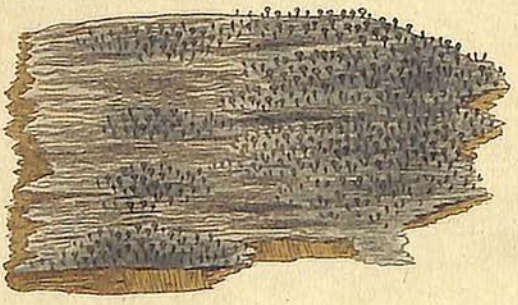
GEN. CHAR. *Receptacles* capitate, stalked, totally different in substance and colour from the crust, with a border of their own substance; disk powdery.

SPEC. CHAR. Crust thin, tartareous, somewhat granulated, of a verdigrise grey. Receptacles on slender black stalks, black, hemispherical, with a convex brownish-black disk.

FOUND by Mr. W. Borrer, on old boards at Cuckfield, Sussex, and communicated to us by Mr. Turner, with the above name, the species being as yet nondescript.

The crust is thin, but more continuous and determined than in some other species, though regularly granulated; white within; externally of a light verdigrise or glaucous grey; occasionally almost white, perhaps from the bleaching effects of air or light, as in *Lichen ventosus, t. 906.* The Tubercles are not very copious in our specimen. Each stands on a slender, black, shining, curved stalk, and is hemispherical or cup-shaped, of the colour of the stalk. The powdery disk is remarkably convex or hemispherical, of a light or brownish black.

2503
1905



Caliciium curtum.

J. Sowerby del. et lith. Pubd. July 1st 1805 by J. Sowerby London.

CALICIUM curtum.

Short-stalked Calicium.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* capitate, stalked, totally different in substance and colour from the crust, with a border of their own substance; disk powdery.

SPEC. CHAR. Crust filmy, very thin, whitish. Receptacles on thickish black stalks, obovate or hemispherical, black, with black, prominent, loose powder.

SYN. Caliçium curtum. *Turn. & Borr. Lich. Brit.* 148.

THE learned authors of the *Lichenographia Britannica*, to whom we are obliged for specimens of this species, describe it as the most common of its genus, on decaying wood in shady places, though not to be referred with certainty to any described by foreign writers.

It is most nearly akin to *C. debile* (see our *t.* 2462), from which, as far as we can find, it differs chiefly in the shortness and thickness of the stalks, and greater size of its receptacles, whose base is always decurrent into the stalk, not flat or excavated underneath. The powder of the disk is also more prominent and copious, sometimes cohering in an oblong shape, like a little brush.

Crataegus Oxyacantha.

J. Sowerby published by Jas. Sowerby London.

MESPILUS Oxyacantha.

Common Hawthorn, Whitethorn, or May.

ICOSANDRIA Pentagynia.

GEN. CHAR. *Cal.* in 5 segments. *Petals* 5. *Drupa* inferior. *Nuts* 2 to 5, with two kernels each.

SPEC. CHAR. Thorny. Leaves obtuse, deeply three-cleft, serrated, smooth. Styles one or two.

SYN. Mespilus Oxyacantha. *Sm. Fl. Brit.* 529. *Hull. ed.* 2. 145 *Relh.* 190.

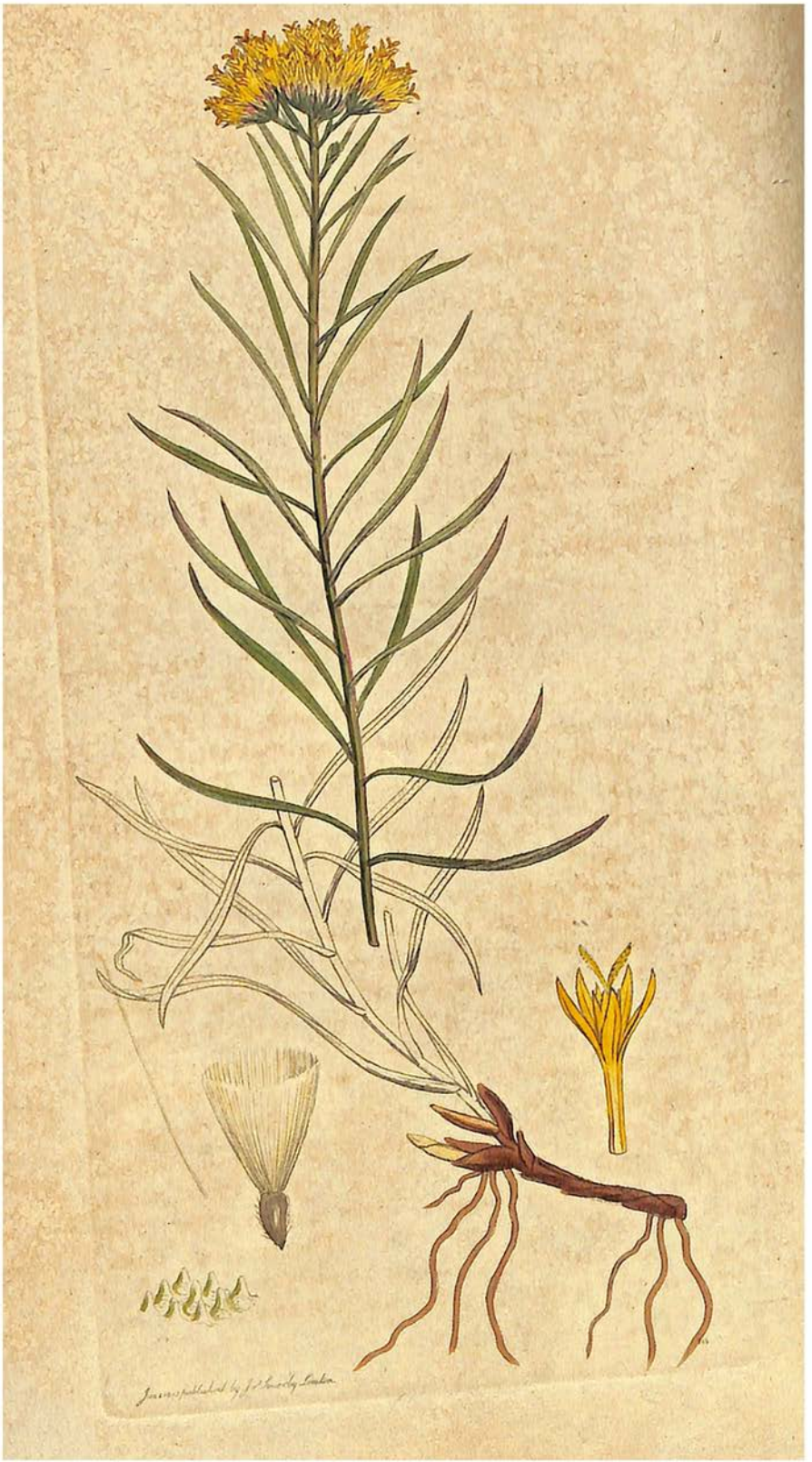
M. apii folio sylvestris spinosa, sive Oxyacantha. *Raii Syn.* 453.

Cratægus Oxyacantha. *Linn. Sp. Pl.* 683. *Huds.* 214. *With.* 459. *Fl. Dan. t.* 634.

C. monogyna. *Jacq. Austr. t.* 292. *Sibth.* 156. *Abbot.* 108.

THIS beautiful and useful shrub, whose abundance and luxuriance with us may well counterbalance the myrtle of more genial climates, forms the natural thickets of most parts of England. It adorns our parks, and makes our best fences. Its ruby-tipped buds are the first sign of vegetation in spring; its sweet blossoms the decoration and the pledge of approaching summer; its fruit the chief wild treasure of autumn. The hard and tough wood is useful for many different purposes, but of slow growth, and generally of no great size. The branches bear clipping to any extent, and the whole bush, if cut nearly to the ground, is speedily restored.

The branches are furnished with rigid spines. The leaves are alternate, stalked, deciduous, of a dark shining green, smooth, in three or five deep serrated segments. Stipulas lunate, varying much in size. Flowers corymbose, terminal, with smooth stalks. Calyx reflexed. Petals concave, usually white; of a beautiful red on a strong or deep soil. Anthers pink, changing to black. Styles one or two in different flowers of the same bunch. Fruit red, rarely yellow, mealy, insipid, with one or two hard nuts. Sometimes there are three styles and as many nuts.—The leaves vary in shape, but we have in vain laboured to ascertain two species of Hawthorn in Britain; nor do the *Oxyacantha* and *monogyna* of Jacquin appear to us permanently distinct.



CHRYSOCOMA Linosyris.

Flax-leaved Goldy-locks.

SYNGENESIA Polygamia æqualis.

GEN. CHAR. *Flowers* discoid. *Receptacle* naked. *Down* simple. *Calyx* hemispherical, imbricated. *Style* scarcely longer than the florets.

SPEC. CHAR. Herbaceous. Leaves linear, smooth. Scales of the calyx loosely spreading.

SYN. Chrysocoma Linosyris. *Linn. Sp. Pl.* 1178. *Fl. Suec.* 283. *Ait. Hort. Kew. ed.* 1. *v.* 3. 163. *Willd. Sp. Pl. v.* 3. 1791.

Linaria aurea Tragi. *Ger. em.* 554.

NO tidings of the present plant, as a native of Britain, have ever reached us, till it was discovered, flowering early in September 1812, by the Rev. Charles Holbech, of Farnborough, Warwickshire, growing in great plenty, amongst a turf of coarse grasses, on the rocky cliff of Berryhead, Devon, about two hundred paces from the westernmost battery, on the Dartmouth side, indubitably wild. This is the small variety, which alone, as Linnæus tells us, grows in the south part of the isle of Oeland. The plant is mentioned as a native of most parts of Germany, as well as of Switzerland, and the south of France. It is scarcely cultivated but in botanic gardens. As we find no coloured figure cited, ours will be the more generally acceptable. Some old authors appear to have described and figured this *Chrysocoma* twice over, misled by its variableness of magnitude.

The root is perennial and creeping, with long stout fibres. Stem erect, round, rigid, simple, smooth, leafy, a foot high, or not so much. Leaves numerous, scattered, linear, acute at each end, entire, rather fleshy, rough with minute white points. Flowers few, terminal, corymbose, of an uniform yellow; their stalks hardly scaly in our specimens. Florets about thirty, uniform, acute. Seeds hairy. Down minutely rough. Cells of the receptacle with a slight jagged border, not amounting to scaliness.

2506.
1777.

Gymnostomum tenue.

Jan 1 1777 published by J. Sowerby London

GYMNOSTOMUM paucifolium.

Few-leaved Beardless-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* without a fringe. *Lid* deciduous. *Veil* separating entire from the base.

SPEC. CHAR. Stem short and quite simple. Leaves linear-lanceolate, bluntish, beardless, single-ribbed, entire. Capsule slightly ovate.

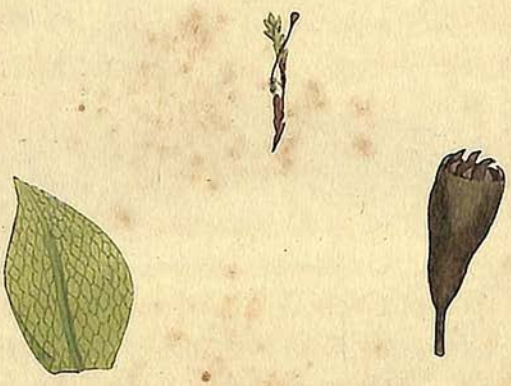
SYN. Bryum paucifolium. *Dicks. Crypt. fasc.* 4. 7. *t.* 11. *f.* 3.

MR. EAGLE communicated these specimens to Mr. Turner as the indubitable *Bryum paucifolium* of Mr. Dickson, found on ruinous brick walls, near Wetherby, Yorkshire, and given him by its discoverer, with whose own description, and with the drawing made originally by Mr. Sowerby from his specimens, it precisely agrees; except, that the capsule is not "toothed," but naked at the mouth. This synonym therefore must be erased from *Dicranum cylindricum, Fl. Brit.* 1221, which, on the authority of Mr. Turner's herbarium, was believed to be Mr. Dickson's plant; and we presume the said *Dicranum* is to be struck out of the British list.

The present moss is very distinct from all the short simple-stemmed kinds of *Gymnostomum* hitherto described. The leaves are linear-lanceolate, somewhat revolute, bluntish, with a strong mid-rib, but no capillary point, and spread moderately in every direction. Fruitstalk terminal, solitary, yellowish. Capsule oblong, slightly ovate, obscurely striated; sometimes contracted just under the orifice. Lid beaked. Veil awlshaped, slender, smooth. The whole plant scarcely exceeds the height of half an inch.

2507

1758.



Splachnum reticulatum.

Folio published by Jas Sowerby London

SPLACHNUM reticulatum.

Reticulated Gland-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* cylindrical, placed on a fleshy *receptacle*. *Fringe* simple, of 16 teeth, standing in pairs.

SPEC. CHAR. Receptacle inversely conical, brown, narrower than the capsule. Leaves ovate, acute, beardless, serrated towards the point.

SYN. Splachnum reticulatum. *Sm. Fl. Brit.* 1177. Bryum reticulatum. *Dicks. Crypt. fasc.* 2. 4. *t.* 4. *f.* 6. *With.* 821. *Hull.* 255.

MR. DICKSON found this *Splachnum* on the Scottish mountain of Ben High. No other person has met with the same, and his original specimens were in an advanced and damaged condition. One of these only, from Mr. Turner's herbarium, could we procure; to which we annex a magnified capsule from Mr. Dickson's plate.

The broad ovate leaves, which are strongly reticulated, distinguish this species from *lingulatum*, *t.* 2095, with which the smallness of the receptacle nearly agrees. The latter, with the swelling capsule, both together form a pear-like figure. The fringe is inflexed. Fruitstalk from the bottom of the stem or branch.

S. Frœlichianum, Hedw. Crypt. v. 3. 99. t. 40, differs in having more spatulate and blunt leaves, with a terminal fruitstalk, and we can scarcely suppose it the same with our plant, though Dr. Swartz unites them. His synonym therefore, cited with doubt in the *Fl. Brit.*, should be excluded from thence, as belonging to the plant of Hedwig.

2508.

1814.

Dicranum heteromallum

Tab. 2508 published by Jas. Sowerby London

DICRANUM interruptum.

Interrupted Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stem somewhat branched. Leaves capillary, single-nerved, dilated at the base, interruptedly curved to one side; curling when dry. Capsule ovate.

SYN. Dicranum interruptum. *Hedw. Sp. Musc.* 129. *t.* 29. *f.* 8—12. *Sm. Fl. Brit.* 1205. *Winch, v.* 1. 102.

Bryum heteromallum β. *Huds.* 484. *Hull.* 263.

B. pilosum, interruptè falcatum. *Dill. Musc.* 376. *t.* 47. *f.* 38.

Mnium heteromallum, var. 2. *With.* 801.

COMMUNICATED by Mr. Winch, from banks near Gateshead, Durham. This is a species which has always caused us some perplexity, on account of its near resemblance to *D. heteromallum*, *t.* 1272. The interrupted growth, or rather occasional shortness of its leaves by intervals, is not so rigidly to be trusted as the more ovate form of the capsule, and the smaller proportion of the fringe. The leaves are broad at the base, then suddenly contracted, roughish at the point; curled when dry.

Dicranodontium Bruntoni

DICRANUM Bruntoni.

Bruntonian Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

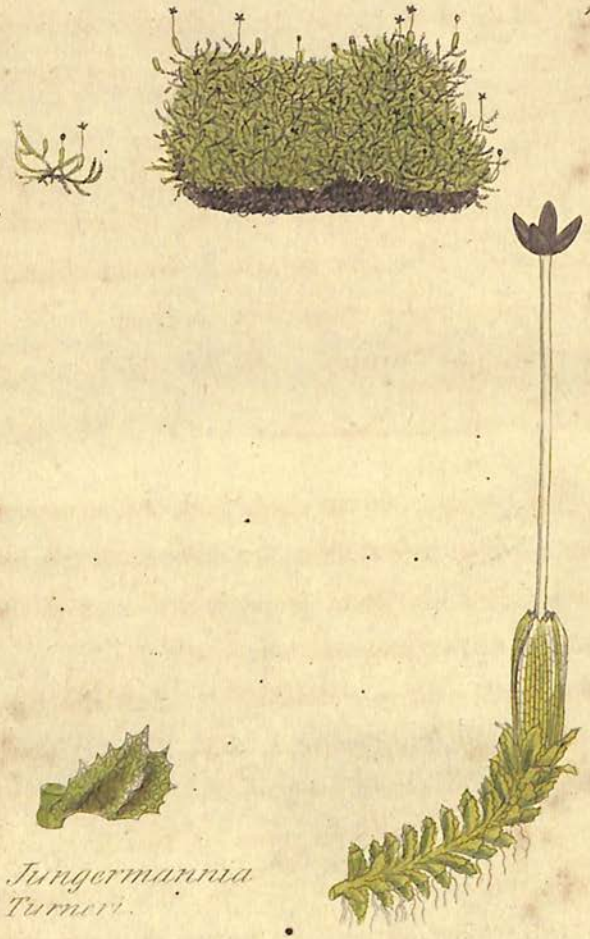
SPEC. CHAR. Stem branched. Leaves lanceolate, acute, serrated at the point, spreading every way; curled when dry. Capsule ovate, oblique, tapering at the base. Lid awlshaped, curved, nearly the length of the capsule.

ACCORDING to Mr. Turner's desire, so consonant with our own, we commemorate in this nondescript species our lamented correspondent the late Mr. Wm. Brunton, who found it in June 1805, on Brimham rocks, near Ripon.

In natural affinity, and general aspect, this *Dicranum* seems nearest to *interruptum*, *subulatum*, and others in their neighbourhood; whilst in definition it may appear more like some towards the end of the first section in *Fl. Brit.* from which its habit greatly differs. The stems compose dense soft tufts, and divide into many short leafy branches. The leaves spread every way when moist, but curl variously in drying; their form is lanceolate and acute, gradually tapering from a broad base, entire, except some fine serratures towards the point, and furnished with a strong mid-rib. Fruitstalks capillary, pellucid, half an inch high. Capsule inclining, ovate, unequal, smooth, of a pale shining brown, contracted or tapering at the base, but we scarcely perceive any *apophysis*. Fringe small, crimson. Lid broad and conical at the base, with a curved taper point, nearly as long as the capsule.

2510.

1826.



Jungermannia Turneri.

JUNGERMANNIA Turneri.

Turnerian Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Procumbent, branched and divaricated. Leaves broad-ovate, deeply cloven, folded, with spinous teeth. Sheaths terminal, linear-oblong, plaited longitudinally, minutely toothed.

SYN. Jungermannia Turneri. *Hooker Brit. Jung. t.* 29.

FOUND by Miss Hutchins, on the shady bank of a mountain-rivulet near Bantry, bearing fruit most plentifully about the beginning of March. It is with great propriety dedicated to the honour of one of the first cryptogamic botanists.

This small but very elegant species belongs to the same tribe as *J. connivens*, *t.* 2436, *bicuspidata*, *t.* 2239, &c. It forms patches of a pale yellowish green, creeping on the ground, and branching from a centre. The leaves spread in two rows, and are deeply cloven, their lobes folded together, and remarkably blistered or minutely cellular, all over, like the branch itself; their edges strongly and sharply toothed. Sheaths terminal, oblong, longitudinally plaited, in consequence as it seems of the contraction of their mouth, whose edge is finely toothed. Fruitstalk rather long, white, slender and cellular. Capsule of four equal entire valves.

2511.
1840.

Jungermannia obtusifolia.

JUNGERMANNIA obtusifolia.

Blunt-leaved Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Ascending, nearly simple. Leaves two-ranked, of two unequal lobes folded together, obtuse, entire; the lower ones somewhat scimitar-shaped. Sheaths terminal, obovate, toothed.

SYN. Jungermannia obtusifolia. *Hooker Brit. Jung. t.* 26.

J. n. 1871. *Hall. Hist. v.* 4. 61? excluding the synonyms.

OUR specimens, from Mr. Turner, were found near Bantry, in Ireland, by Miss Hutchins. Mr. Thornhill first discovered this species, in 1805, near Heddon on the wall, Northumberland.

Numerous, little, more or less crowded plants, scarcely half an inch high, form dense tufts, two or three inches broad, of a pale, dirty, or brownish, green. Each plant is attached to the earth by innumerable radicles, except the ascending extremity, and is generally quite simple, the female fructification being terminal, though the shoot seems to be now and then subsequently extended beyond it The leaves spread in two ranks, without stipulaceous scales, and are recurved or scimitar-shaped, consisting of two rounded, very blunt, almost always entire, lobes; the smaller one erect, or rather folded upon the other. Sheath inflated; its mouth toothed and contracted. Fruit-stalk about as long as the whole stem. This species bears fruit in March and April. Mr. Hooker finds it alway dioecious. It cannot be confounded with any other.

2512
1822.

Jungermannia
inflata.

Fl. Lond. Published by Jas. Curtis.

JUNGERMANNIA inflata.

Inflated Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Procumbent, branched. Leaves two-ranked, spreading, roundish-wedgeshaped, cloven, with distant bluntish segments: without scales. Sheaths terminal, obovate, inflated; contracted and toothed at the orifice.

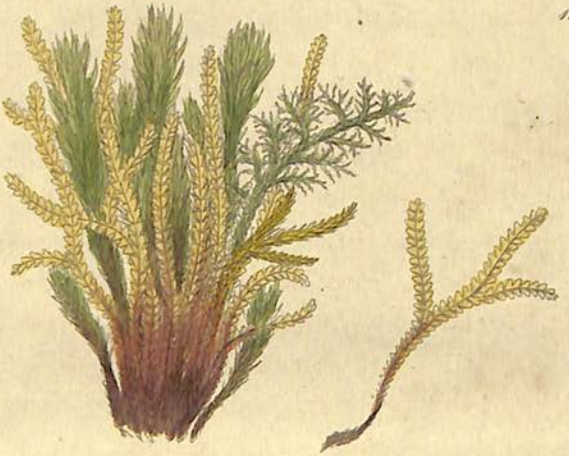
SYN. Jungermannia inflata. *Huds.* 511.
J. bidentata var. 2. *With.* 871. *Hull.* 278.
Lichenastrum pinnulis obtusioribus bifidis, minus. *Dill. Musc.* 488. *t.* 70. *f.* 12.

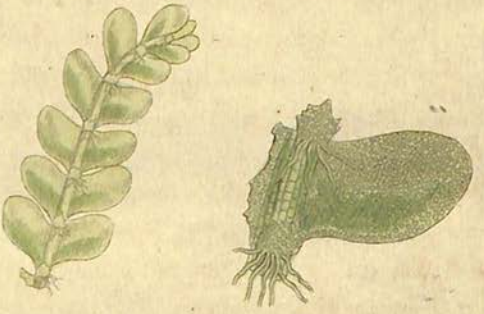
A NATIVE of shady rather moist places, communicated by Mr. Turner. This is evidently very different from the *bidentata*, *t.* 606, of which some have thought it a variety, and which is admirably represented in Mr. Hooker's *t.* 30, with its laciniated stipulaceous scales, omitted in our plate.

The present is a much smaller plant; the leaves more separately and horizontally spreading, without scales. Mr. J. D. Sowerby has found a lateral notch in two or three pair of the uppermost, which are rather larger than the rest of the foliage. The sheaths are terminal, and very distinct, being inflated into an obovate or pear-like figure; quite close, and sharply toothed, at the mouth. Hence Hudson well derived the name. Mr. Hooker informs us that Schmidel has figured this species, in one of his latter plates, not in our possession, by the name of *bicrenata*. Micheli's t. 5. f. 13, quoted by Dillenius, appears by the sheath to be different.

2513

1831.





Jungermannia viticulosa.

Pubd as published by J. & T. Arch, London

JUNGERMANNIA viticulosa.

Straggling Flat Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Shoots branched, spreading. Leaves two-ranked, vertical, flat, entire; with intermediate, roundish, toothed scales. Sheaths lateral.

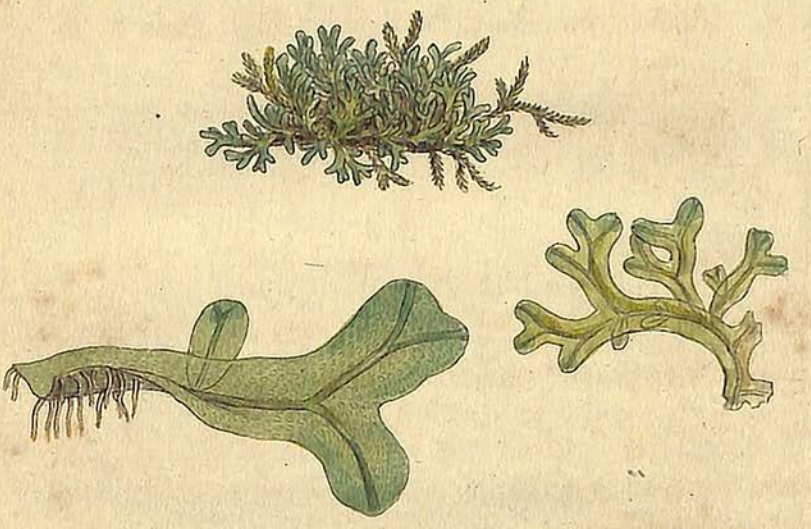
SYN. Jungermannia viticulosa. *Linn. Sp. Pl.* 1597. *Huds.* 509. *With.* 873. *Hull.* 278. *Lightf.* 772. *Relh.* 438. *Sibth.* 308. *Abbot.* 252.

Lichenastrum trichomanis facie, e basi et medio florens. *Dill. Musc.* 484. *t.* 69. *f.* 7.

L. capitulis nudis, trichomanis facie, foliolis densiùs congestis majus. *Dill. in Raii Syn.* 111.

NOT uncommon among tufts of moss in shady woods. The fructification is said to be produced in February and March, but neither Mr. Hooker nor ourselves have yet obtained it. Dillenius represents the sheaths and capsules, in sufficient abundance, all situated on the upper side of the branches, especially towards the bottom.

The shoots are branched and straggling, sticking by their minute radicles to the neighbouring mosses, beset with two close ranks of flat, vertical, entire, opposite, pale and pellucid leaves, which vary in shape and acuteness, and are very tender, shrivelling up as soon as they begin to dry. Between each pair, underneath, is a minute, roundish, sharply-notched scale, accompanied by a little tuft of radicles. The definition in Linnæus, "leaflets awlshaped," is founded in some error, and he has erased it in his own copy of *Sp. Pl.*



Fibras published by J. & A. Arch, Cornhill.

JUNGERMANNIA fruticulosa.

Tufted Blueish Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Flat, branched, entire; branches upright, forked, obtuse; the extremities blueish.

SYN. Riccia fruticulosa. *Dicks. Crypt. fasc.* 1. 8. *With.* 888. *Hull.* 283. *Fl. Dan. t.* 898. *f.* 3 ?

FOUND by Mr. Dickson, growing on the lower part of the trunks of trees, among moss. It composes dense, crisped, tender and succulent tufts, remarkable for their vivid verdigrise tint. Except in posture and colour, the whole plant wonderfully resembles *Jungermannia furcata, t.* 1632, of which there is much reason to suspect it a variety. Still, in deference to our great British cryptogamist, we are happy to have the means of exhibiting some of his original specimens. We must allow that the synonym of *Fl. Dan.* scarcely, in our opinion, accords with this plant. Nothing is known of the fructification, but we are fully persuaded of its being that of a *Jungermannia,* and therefore make no scruple of removing the plant to that genus, in which we have the sanction of Mr. Hooker's opinion.

11.54.

Senecio lividus.

Edwards pubd by Jos. Lindley, London

SENECIO lividus.

Green-scaled Groundsel.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, many-leaved, equal, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius revolute. Leaves clasping the stem, lanceolate, pinnatifid and toothed. Scales of the calyx short; their points acute, and not discoloured.

SYN. Senecio lividus. *Linn. Sp. Pl.* 1216. *Willd. Sp. Pl. v.* 3. 1983.

S. corollis revolutis, foliis amplexicaulibus lanceolatis dentatis, squamis calycinis brevissimis intactis. *Linn. Hort. Ups.* 261.

Jacobæa annua, senecionis folio, fœniculi odore. *Till. Pis.* 86. *t.* 28. *f.* 2.

THIS new British plant was discovered in October, 1812, by W. Middleton, Esq., on some newly enclosed moor land at Sneaton, near Whitby, Yorkshire, and no one can withhold from its finder the praise of great accuracy of observation. Its appearance is most like *S. sylvaticus*, *t.* 748, but the essential and all-sufficient marks of distinction are the dilated base of the leaves, which embraces the stem, and the taper-pointed scales at the base of the calyx, which are not blackened and abrupt at the tip, as in perhaps every other *Senecio;* so that it in some measure wanders from the generic character. By the Linnæan herbarium we find this species varying very much in the depth of the segments of its leaves. Mr. Middleton observes that the florets of the radius are not at first revolute, but gradually become so. The seeds of this plant, as well as of *S. squalidus*, *t.* 600, were sent to Linnæus by Dillenius. An Italian specimen, from Arduino, helps us to the synonym of Tilli.

Carex rariflora.

Pub. 1 Nov. 1832 published by J. Sowerby London.

CAREX rariflora.

Loose-flowered Alpine Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. Female *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Sheaths extremely short. Female spikes nearly linear, pendulous; their scales loosely imbricated. Fruit obovate, with three blunt angles and depressed sides. Root creeping.

SYN. Carex limosa γ, rariflora. *Wahlenb. in Stock. Trans. for* 1803. 162. *Willd. Sp. Pl. v.* 4. 294.

DISCOVERED in 1807, by Mr. G. Don, on a mountain at the head of a glen called the Dell, among the mountains of Clova, Angusshire, near the limits of perpetual snow. Its acute discoverer wished therefore to have named the species *C. nivalis*; but we think it incumbent on us to retain the appellation by which this plant is marked, very unaccountably indeed, as a variety of *C. limosa*, *t.* 2043, in the above works. We have authentic specimens from Mr. Wahlenberg, precisely like Mr. Don's.

Surely few *Carices* can be more distinct than this and *limosa*. They agree indeed in the creeping root, short sheaths of the bracteas, and drooping female spikes; but the present is in every part much smaller, and the shape of the female spikes, composed of a few remarkably lax, or distant, scales, blacker than in *limosa*, marks a sufficient difference. The fruit is obovate, not broad and compressed.

251
18.56

Jungermannia barbata.

Hanna published by J. & C. Smith, London

JUNGERMANNIA quinquedentata.

Toothed Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Tufted, somewhat branched. Leaves two-ranked, ascending, roundish, undulated, with several distant sharp teeth. Scales acutely toothed. Sheaths terminal, angular.

SYN. Jungermannia quinquedentata. *Huds.* 511. *Linn. Sp. Pl.* 1598. *With.* 871. *Hull.* 278. *Lightf.* 775.

Lichenastrum multifidum majus, ab extremitate florens. *Dill. Musc.* 494. *t.* 71. *f.* 23.

L. trichomanis facie, foliolis multifidis, capitulis e summis ramulis nascentibus. *Dill in Raii Syn.* 113.

GATHERED, in August 1788, by the late Mr. R. Teesdale on the high rocks of Cromford moor, near Matlock. Mr. Turner has communicated a specimen with anthers, sent by Miss Hutchins from Bantry. Mr. Hooker observes that it is very common in mountainous countries, but he has never met with the female fructifications; which Dillenius says are found in the spring, the sheaths being angular, with a toothed contracted mouth.

This plant grows in very broad, dense, yellowish-green, soft, cushion-like patches, composed of innumerable crowded ascending leafy stems, about two inches long, simple or branched. Leaves imbricated in two rows, turned to the upper side, alternate, roundish-ovate, undulated, with two, three, four, or five distant, broad, sharp, spreading teeth. Along the under side of the branch is a row of small, acute, finely toothed, stipulaceous scales, not always readily to be seen. Anthers axillary, among the upper leaves. Dillenius quotes, and unjustly criticises, Micheli's t. 6. f. 2, which belongs to a very different species. See *J. radicans*, *t.* 2232.

2518

1846.

Jungermannia anomala.

JUNGERMANNIA anomala.

Various-leaved Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile. *Anthers* stalked. *Capsule* on a stalk, rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

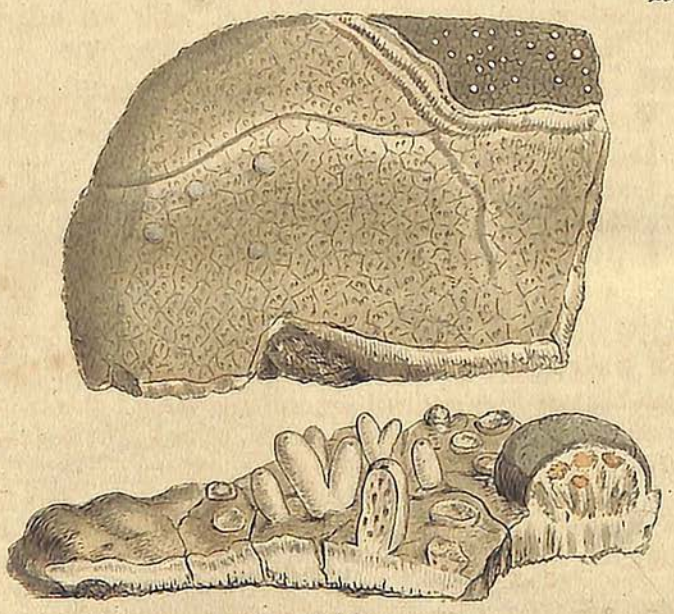
SPEC. CHAR. Procumbent, unbranched. Leaves two-ranked, somewhat ascending, entire, concave, orbicular; some pointed; others blunt. Scales awlshaped.

SYN. Jungermannia anomala. *Hooker Brit. Jung. t.* 34.

A NEW species, first detected by the Rev. R. B. Francis near Holt, Norfolk, in boggy turfy places; and subsequently by various persons in Ireland and elsewhere. Mr. Hooker alone has described it. The female fructification remains hitherto unobserved. The anthers have been found by Mr. Lyell only, in Hampshire.

Ours are gemmiferous plants, communicated by Mr. Turner. They grow dispersed, procumbent on the ground, or more frequently creeping upon Bog-moss, each being from one to two or three inches long, simple, except now and then one or two lateral shoots, but they are more usually elongated at the summit only. Leaves inaccurately two-ranked, rather various in their direction, but for the most part turned to the upper side, all entire. They differ greatly in shape, from an orbicular and very blunt, to an ovate acute figure, the former being most concave. This variableness, and their coarse reticulations, are pointed out by Mr. Hooker as the most striking features of the species. He describes the stipulaceous scales as broadly awlshaped. These we have not observed, nor do they appear in his figure. The colour of the whole is a rich tawny or purplish green. *Gemmæ*, or granular buds, are found amongst the topmost leaves.

2519.



May 1813 published by J.& Sowerby London

VARIOLARIA dealbata.

White-wash Variolaria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* cup-shaped, with a torn border from the crust, powdery, with a fertile disk beneath.

SPEC. CHAR. Crust tartareous, thickish, greyish white, cracked, tumid, papillary and rugged; obscurely zoned at the circumference. Receptacles orbicular, prominent, white, with an aggregate internal disk.

SYN. Variolaria dealbata. *Decand. Franc. v.* 2. 525?
V. corallina. *Ach. Lich. Univ.* 319. *t.* 5. *f.* 6.
Lichen dealbatus. *Ach. Prodr.* 29.
Isidium corallinum, a supposed variety. *Ach. Meth.* 138. *t.* 3. *f.* 7; bad.
I. paradoxum. *Turn. & Borr. Lich. Brit. v.* 1. 97.

WE are obliged to Mr. Turner for this very complete specimen; but we have received others from various British friends, as well as from Dr. Acharius. The plant is not rare on hard rocks, in mountainous countries.

It differs from *V. lactea*, *t.* 2410, in having a very narrow, imperfectly zoned, border, but especially in the crust bearing scattered, cylindrical, papillary processes, often two together. The receptacles, when young, are small, concave, powdery, white cups; but when arrived at maturity, which happens to a few of them only, they become raised and convex, as large as hemp-seed, their surface still white and powdery, but finally displaying several little, concave, brownish or flesh-coloured, separate disks.

The learned authors of the *Lichenographia Britannica*, from whom we have taken our two first synonyms, consider this plant as an *Isidium*, on account of the *papillæ*, not without a most candid expression of their doubts. We dissent from them with much hesitation; but having, in no species, been perfectly satisfied of the nature of those *papillæ*, we are now led the more to doubt their being the fruit, and we rather rely on the receptacles, obviously agreeing with *Variolaria*.

2520.
1805

Calicium sessile.

CALICIUM sessile.

Black Sessile Calicium.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* capitate, stalked, totally different in substance and colour from the crust, with a border of their own substance; disk powdery.

SPEC. CHAR. Crust not discoverable. Receptacles nearly sessile, pear-shaped, black, polished, with a thick inflexed margin, and black powder.

SYN. Calicium sessile. *Pers. Tent. suppl.* 59. (*Ach.*) *Turn. & Borr. Lich. Brit. v.* 1. 128.

C. stigonellum. *Ach. Meth.* 88.

Lichen gelasinatus. *With. v.* 4. 8. *t.* 31. *f.* 1. *Hull.* 285.

Sphæria sphincterica. *Sowerb. Fung. t.* 386. *f.* 1; excluding the reference to Bulliard.

THIS remarkable production was first made known in England by Dr. Withering, who described it as a new *Lichen*, not adverting to its being a parasite on the well-known *L. pertusus*, *t.* 677. Many have, with more probability, taken it for a fungus; but Mr. Turner and Mr. Borrer retain it (after Persoon) in *Calicium*; a measure justified by its near affinity to our *Lichen microcephalus*, which is properly a *Calicium* also.

Its chief singularity is the total absence of a crust, at least at the period of its fructification. The receptacles are scattered over the tumid unequal crust of the plant which is their foster-mother, into which they are a little sunk. Each looks like a grain of the finest gunpowder, but under a microscope proves pear-shaped, polished, with a very short solid stalk, the disk small, deeply hollow, produeing a black opaque powder. The margin is said to be occasionally white.

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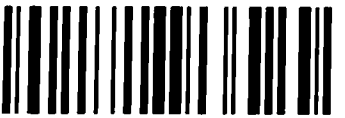
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